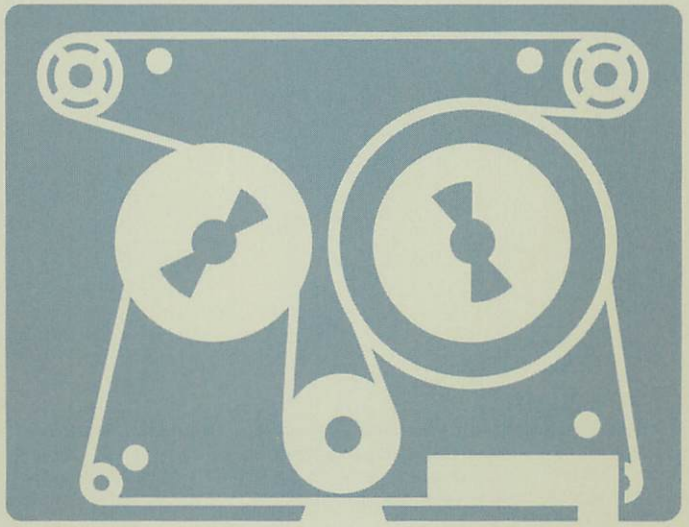
BACKUP™



WITH

EZ TAPE®

FOR DOS

USER'S MANUAL

IRWIN® MAGNETICS

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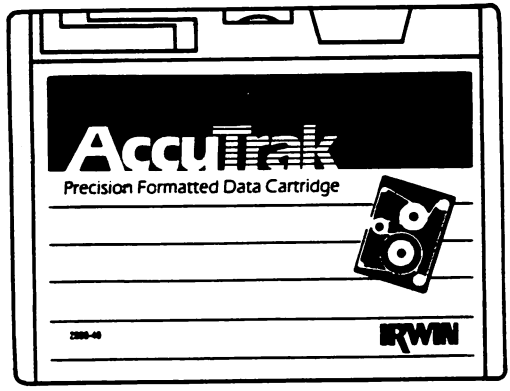
Congratulations! You have chosen the finest backup system available for your personal computer. Irwin BACKUP is designed, built, delivered, and supported with you in mind every step of the way.

Among the many features of the **EzTape®** software, you will find:

- It's fast! Back up your hard disk at a normal operating rate of 2 MB per minute.
- Data integrity. Irwin achieves precise head positioning using AccuTrak^{TM} electronic tracking technology. This technique ensures accurate reading and writing of your valuable data.
- Irwin provides interchange between your IBM PC, PS/2, or compatible computer and Apple® Macintosh^{TM}. A backup made by **EzTape for DOS** 2.0 can be restored by **EzTape for Macintosh** 1.0 on a Macintosh (or vice versa).
- Security. Irwin's patented EC/Tape^{TM} error correction code can actually correct for irregularities in the tape media.
- Virtually limitless tape storage is achieved with high capacity tapes and the ability to back up over multiple tapes.
- **EzTape** backup can be performed automatically. Use **EzStart**^{TM} to schedule backups that can start and run unattended.

Thank you for choosing Irwin. We are committed to your complete satisfaction and data security.

IRWIN® MAGNETICS



AccuTrak Tape Cartridges

AccuTrak Precision Formatted Data Cartridges are specifically designed for use with Irwin tape drives. They are the most convenient and highest quality cartridges available. AccuTrak cartridges are ready to use, saving time and making backup more convenient.

AccuTrak is Irwin's patented tracking technology. It uses electronic servo signals on each tape track to keep the drive's read/write head centered.

AccuTrak technology ensures upward compatibility and data cartridge interchangeability. This makes AccuTrak cartridges ideal for exchanging large volumes of data between Irwin systems throughout an office or across the country.

The exclusive AccuTrak process produces the best cartridge you can buy for your Irwin tape backup system. Each AccuTrak tape comes with a 2 year limited warranty.

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Chapter 1: Getting Started

1.1 This Manual

This manual tells how to use the **EzTape®** software with your Irwin **BACKUP** tape system. Information that you must type or that appears on your display screen is printed like this:

```
Do you want to do the backup? Yes
```

Keys you press are shown like this:

[F1]

Commonly used keys and their functions are described below:

[↑] Arrow key, used to move the cursor up to highlight the name of a desired option.

[↓] Arrow key, used to move the cursor down to highlight the name of a desired option.

[B] Letter key, also used to specify a desired option. In this example, 'Backup'.

[Esc] Escape key. Used to return to a previous screen. If you are in file selection, your selections are automatically saved. If you are in the Main Menu, your cursor will move to the 'Quit' option.

[CTRL] + [C]
This will abort the procedure you're in.

[↵] This key may be labeled 'Return' or 'Enter', depending on your computer's keyboard. Use this key to enter information that you have typed, or to advance from one screen to the next.

[F1] Function key. **EzTape** uses all ten function keys.

1.2 System Requirements

- Formatted **hard disk**
- **MS-DOS** or **PC-DOS** Version 2.00 or later
- **512K bytes of memory**
- Installed Irwin tape drive
- Tape cartridge

If your computer is still new and unfamiliar to you, review your DOS manual before installing the **EzTape** software to gain an understanding of DOS commands and disk organization.

If you have memory resident applications other than DOS, you may not be able to run **EzTape** while they are installed. **EzTape** performance is optimized on a computer with 640K bytes of memory, and no memory resident applications other than DOS.

If you do not have enough memory available, **EzTape** will display a message and it will not execute.

If you have an external tape drive, be sure to position it at least 12 inches from the monitor or other high frequency noise generating sources.

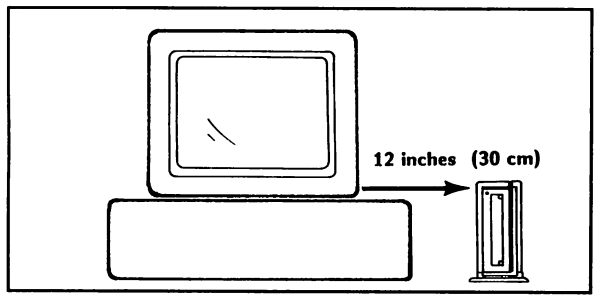


Figure 1–1
Positioning the External Tape Drive

1.3 Installing Your EzTape Software

The program diskette supplied with your Irwin **BACKUP** tape drive contains the **EzTape** control programs you need to back up and restore data to and from your hard disk. This section tells you how to use the automatic software installation program to copy these files onto your hard disk. It takes just a few minutes to run.

The floppy drive in your computer is probably identified as drive A, and the hard disk as drive C. If not, substitute the correct letters in the steps below.

1. You must be logged onto the hard disk drive. To make sure, enter

   `C:` then press [↵].

2. Insert the **EzTape** diskette into your floppy diskette drive A. Then enter

   `A:INSTALL` and press [↵].

3. Answer the questions that appear on the screen. In most cases the default answer provided will be correct.

4. When the procedure is complete, remove the diskette and store it in a safe place. You should not have to use it again unless the programs you just copied to the hard disk are damaged somehow.

5. Reboot your system by pressing the [CTRL], [ALT], and [DEL] keys at the same time.

6. **EzTape** is installed and ready to use. To verify this, enter

   `CD \EZTAPE` and press [↵].

   If you have installed **EzTape** in a directory other than `C:\EZTAPE`, substitute that directory name in the above command, and wherever you see it in this guide.

7. Then enter:

   `EZTAPE` and press [↵].

The Irwin logo will appear on the screen, followed by the **EzTape** main menu.

Whenever the **EzTape** program is loaded, the light on the tape drive's cover flickers periodically. In addition to the steady pulsing of the light, it also flashes whenever tape drive activity such as identification of the drive, tape cartridge insertion or removal, or reading and writing of the tape occurs.

NOTE: If you experience any difficulty using **EzTape** with a non-standard hard disk which utilizes a special device driver, try using the `DOSONLY` environment variable. At the DOS prompt, type `SET DOSONLY = 1`. Then run **EzTape** as usual. You may want to place this statement in your AUTOEXEC.BAT. **`DOSONLY` should not be used in any other situations, since it will cause tape operations to be much slower when used with a standard hard disk.**

The CONFIG.SYS File

To get optimal performance when using **EzTape**, you should have a CONFIG.SYS file in the root directory which includes the two lines shown below. This example shows how to create the CONFIG.SYS file. If you already have a CONFIG.SYS file, you should append the lines.

> **Warning: If you already have a CONFIG.SYS file, this procedure will replace it.**

1. From the DOS prompt, enter
   `COPY CON: CONFIG.SYS` and press [↵].
2. Enter:
   ```
   FILES=10
   BUFFERS=20
   ```
3. Press [F6], then press [↵].

The AUTOEXEC.BAT File

If you do not already have an AUTOEXEC.BAT file, the **EzTape** installation program will create one in the root directory if you specify that you want to install **EzStart**^{TM}. If **EzTape** creates the file, it will contain these lines:

```
DATE
TIME
C:
CD \EZTAPE
EZSTART
CD \
```

If you already have an AUTOEXEC.BAT file, the **EzTape** installation adds the lines to it if you specify **EzStart**.

These commands will:

1. Prompt you to enter the correct date when you start your system up.

2. Prompt you to enter the correct time when you start your system up.

3. Load **EzStart** every time you start the system.

You may also want to add a line to the AUTOEXEC.BAT file that specifies the **EzTape** directory in the search path. That way, you will not need to move to the **EzTape** directory every time you want to use it. To learn more about the AUTOEXEC.BAT file, consult your DOS manual.

1.4 Help

Every **EzTape** menu includes the F1 key. If you are performing an **EzTape** operation and are not quite sure about it, you can always press F1 for HELP. The first time you press F1, you'll get a brief message directed specifically at the highlighted option. If you press F1 a second time (while first level HELP is displayed), you'll get a more detailed explanation about the operation.

1.5 About Tape Cartridges

Irwin employs a patented method, called AccuTrak^{TM}, to embed servo patterns on the tape. Using this method, very precise head positioning over the tape can be achieved. This, along with error correction techniques, ensures the reliability and integrity Irwin is known for. You will find it convenient to purchase AccuTrak precision formatted tapes that have already been prepared for use. They can be obtained from your Irwin dealer.

If you elect to use tapes that are not pre-formatted, refer to Chapter 8.

1.6 Interchange with Macintosh

One the great features of your Irwin BACKUP system is that a backup you make with **EzTape for DOS** (2.0 or later) can actually be restored to an Apple Macintosh using **EzTape for Macintosh** (1.0 or later). If your environment includes both Macintosh and IBM PC, PS/2, or compatible computers, this can be extremely useful.

In addition, a backup made by **EzTape for Macintosh** (1.0 or later) can be restored to your IBM PC, PS/2 or compatible computer using **EzTape for DOS** (2.0 or later).

When transferring files this way, you'll notice that DOS directories are translated into Macintosh folders, and vice versa. When files from one environment are restored to the other, the filenames must suit the conventions of that environment. DOS files restored to the Macintosh environment will retain their filenames. However, when a Macintosh file is restored to a DOS environemt, filenames will be truncated to eight characters. If there are characters in the Macintosh name which are cannot be used in DOS filenames, **EzTape** will not restore the file. It would be advisable to rename the files in such cases.

Macintosh files are partitioned into data forks and resource forks. Both data forks and resource forks from a Macintosh backup are restored within the Macintosh environment. However, when restoring to the DOS environment, the resource forks are not included. The resource forks contain information that is not pertinent to the DOS environment. Macintosh data forks are restored to the DOS environment.

1.7 A Note for Experienced Irwin Users

EzTape Compatibility

If you are updating from the 1.x series of **EzTape** software, you should know that the 2.0 series of **EzTape** can restore files from tapes made by earlier versions. Once you have restored your files, you can set the tapes to unused using **EzTape** 2.0. You cannot make backups on tapes made by earlier versions of **EzTape until** you have set them to unused first. You can also use Irwin AccuTrak tapes right out of the box. Then use **EzTape** 2.0 for all your backups and restores.

A tape made by **EzTape** 2.0 **cannot** be read by earlier versions.

FIP, IMAGE, TFORMAT Compatibility

If you own Irwin software preceding **EzTape**, you are familiar with the programs called IMAGE, FIP, and TFORMAT. Using **EzTape**, you can restore files individually from tapes made with the IMAGE program – that's something you could never have done with the IMAGE program itself. However, backup tapes that you made with the FIP program cannot be restored with **EzTape**.

The tape cartridges you used with the earlier software are the same type **EzTape** uses. If you have tapes formatted by TFORMAT, you can use them with **EzTape**. (In **EzTape**, the process of servo-writing and formatting is referred to as 'initializing'.) You must set the tape to unused before **EzTape** can write to the tape. You can also use Irwin AccuTrak precision formatted tapes. However, tapes formatted by **EzTape** cannot be read by the previous versions of software.

If you have backups made with the earlier software on which you have stored data for archival, you will probably want to restore that data using the earlier software and then make a new backup using **EzTape**. That way, when you need to access your archived data you can take full advantage of **EzTape**'s flexibility.

You should save your diskette containing the earlier Irwin software. You might come across a FIP backup that you forgot to convert.

Chapter 2: EzTape Basics

This chapter will describe how to make a backup of your entire hard disk, how to back up only files that have changed since the last backup, and how to restore your entire hard disk. It uses three batch files that come with **EzTape**. (Files can also be backed up and restored selectively even from an image backup of your entire hard disk, as described in the next chapter.)

2.1 Backing Up Your Entire Hard Disk

1. Insert an initialized tape cartridge into your Irwin drive.
2. At the DOS prompt, enter:

   `CD \EZTAPE` and press [↵].
3. Enter:

   `BACKALL` and press [↵].
4. When the backup is complete, **EzTape** will return you to the DOS prompt in the **EzTape** directory.
5. Remove the tape. Label it with the date and contents. You may want to move the write-protect tab to the right to ensure that this data cannot be overwritten.

   NOTE: If the capacity of your hard disk is greater than the capacity of an individual tape for your drive, you may need more than one tape to complete a backup of your entire disk. You should have the necessary tapes initialized ahead of time so that you will not have to interrupt the backup operation. If you have to cancel the backup operation, hold down the [CTRL] key and press [C].
6. When you run the `BACKALL` batch file again, the new backup of your entire hard disk will **overwrite** the old one if you

use the same tape. The name of the backup set on the tape will be IMAGE.

Note: The BACKALL batch file backs up all files on the hard disk except hidden and system files.

2.2 Backing Up Modified Files

This batch file selects all files on your hard disk that have been created or modified since the last backup.

1. Insert an initialized tape cartridge into your Irwin drive.

   At the DOS prompt, enter:

   CD \EZTAPE, and press [↵].

2. Enter:

   CHANGED, and press [↵].

3. When the backup is complete, **EzTape** will return you to the DOS prompt in the **EzTape** directory.

4. Remove the tape. Label it with the date and contents. You may want to move the write-protect tab to the right to ensure that this data cannot be overwritten.

Backup sets made from the CHANGED parameter file can be appended (added on) to other CHANGED backup sets. The backup sets do not overwrite.

2.3 Restoring Your Entire Hard Disk

Insert the tape cartridge which contains the backup of your entire hard disk into your Irwin drive. If the backup of your entire hard disk required more than one tape, you will need to have all of the tapes available in order to perform the restore.

1. At the DOS prompt, enter:

   `CD \EZTAPE` and press [↵].

2. Enter:

   `RESTALL` and press [↵].

3. If you have some newer files on the hard disk, **EzTape** will ask you if it should overwrite a new file on the hard disk with the old file on the tape.

4. When the restore is complete, **EzTape** will return you to the DOS prompt in the **EzTape** directory.

5. Remove the tape and store it in a safe place.

   NOTE: The RESTALL batch file will restore the entire contents of your tape cartridge to the hard disk. If you have more than one backup set on the cartridge, it will restore them all in the order in which they were backed up.

If Your Hard Disk Was Damaged or Destroyed

If you are restoring your entire image backup because your disk was destroyed somehow, or if you have reformatted your hard disk, you will need to take some special steps.

- Be sure the hard disk is formatted and the system files have been installed. Consult your DOS manual for step by step procedures. This usually involves booting your system with the DOS diskette in drive A. Then, you will probably format the C drive using the /s parameter. The /s installs the system files.

- Re-install **EzTape** following the instructions in the installation section of this manual (see page 1–3).

- The version of DOS that you installed should be the same as the version you're about to restore from tape. If it is not the same, you should restore using file selection as described in the next section so that incompatible DOS files are not copied to the hard disk.

- If the capacity of your new hard disk, or the size of the new DOS partition, is smaller than the amount of data you plan to restore, you should selectively restore files as described in chapter 3. If you have questions about the size of the DOS partition, consult your DOS manual. The FDISK utility can be used to check the size of the partition.

After preparing your hard disk and system files, you are ready to restore from your tape backup using the procedure described in the preceding section, "Restoring Your Entire Hard Disk".

2.4 Your Backup Plan

A good way to use these batch files is to run a BACKALL of your entire hard disk first. Then, run the CHANGED backup each day until you perform another BACKALL of your entire hard disk. You can use **EzStart** to automate the process (see page 6–1).

A very comprehensive backup strategy uses three tapes, rotated in use so that you always write on the oldest version, and thus have two other recent versions in case of difficulty. This "grandfather-father-son" backup strategy is common in large data processing operations. The strategy outlined below uses this approach on both a weekly and monthly basis.

1. **Week 1**: Make a complete (BACKALL) backup on Friday. Label the tape with "BACKALL #1" and the date, and store it in a safe place.

   Back up your active data files (using the CHANGED batch file) at the end of each day except Friday. Use a separate tape for each day. Label them: "Monday", "Tuesday", "Wednesday", and "Thursday". Store them in a safe place.

2. **Week 2**: Make a complete (BACKALL) backup on Friday, using a new tape. Label the tape with "BACKALL #2" and the date. Store it with your other weekly tape.

   Back up your active data files each day using the CHANGED batch file. Write over the tapes used in the previous week. Use the tape labeled "Monday" on Monday, "Tuesday" on Tuesday, etc. Store each day's tape.

3. **Week 3**: Make a complete (BACKALL) back up on Friday, using a new tape. Label the tape with "BACKALL #3" and the date. Store it with your other weekly tapes.

   Back up your active data files each day using the CHANGED batch file, and writing over the daily tapes.

4. **Week 4**: Make a complete (BACKALL) back up on Friday. Label it with the month and store it.

Make another complete (BACKALL) back up on Friday, writing over the "BACKALL #1" tape. Store it.

5. **Weeks 5-8**: Repeat the steps above. When you make your Friday backup, write over the oldest of the three weekly tapes. When you make your end-of-the-month backup, use a fresh tape. Label it with the month and store it.

6. **Weeks 9-12**: Use a fresh tape for the third end-of-the-month backup, too. When you reach the fourth month, make your backup by writing over the first month's backup. Each month after that, write over the oldest of the three monthly tapes.

You need a total of ten tapes for this method. This strategy is extremely comprehensive and provides a very effective backup library for very sophisticated applications. Using such a scheme, you can recover infrequently used files, lost months before and just discovered missing.

Chapter 3: Basic File Selection

3.1 Selecting Files for Backup

You can make individual backup selections at any of three levels:

- **DRIVE**
- **DIRECTORY/SUBDIRECTORY**
- **FILE**

The keys used in basic file selection are listed below.

[+]	to SELECT a file, directory, or drive
[-]	to UNSELECT a previously selected file, directory, or drive
[↵]	to display the next screen for the item currently highlighted
[Esc]	to return to the previous screen. Any selections you made will be saved.

The steps involved in basic file selection are outlined below.

1. Insert an initialized tape into your Irwin **BACKUP** drive.
2. At the DOS prompt, enter:

   `CD \EZTAPE`, and press [↵].
3. Enter:

   `EZTAPE`, and press [↵]. The main menu is displayed (see **Figure 3–1**).

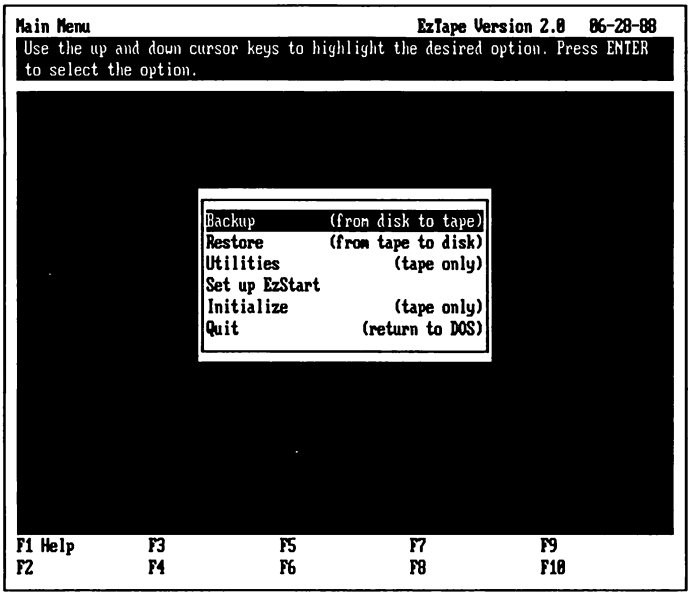


Figure 3–1
The Main Menu

4. From the main menu, press [B] to select **Backup** from the menu. A screen will be displayed as shown in (**Figure 3–2**).

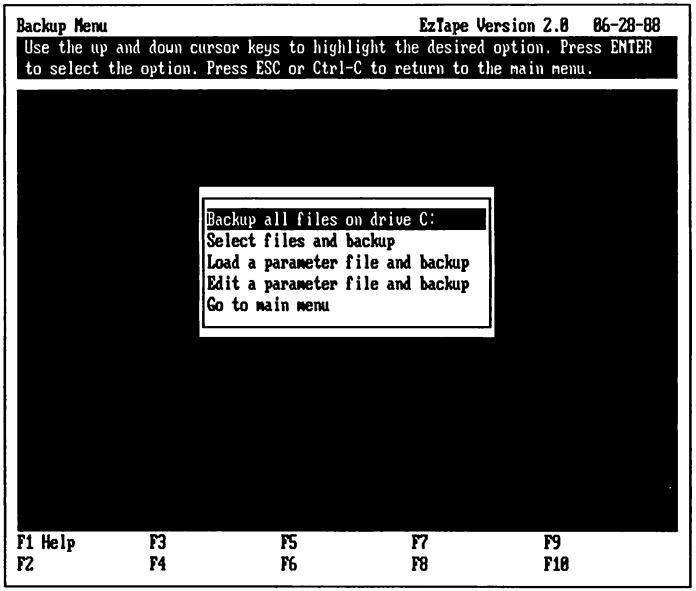


Figure 3–2
The Backup Menu

5. From the Backup Menu, press [S] to choose **Select Files and Backup** from the menu. The screen displays the source drives available for backup (**Figure 3–3**).

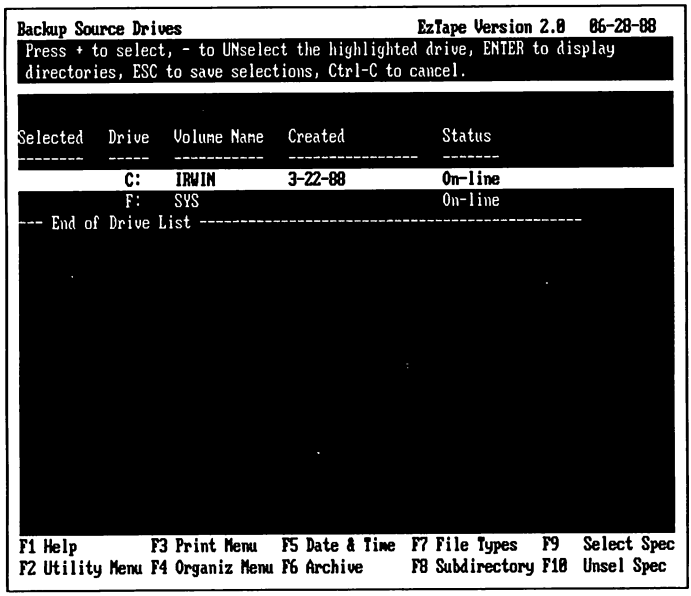


Figure 3–3
Backup Source Drives Screen

6. **Select Source Drives**: You can select the entire contents of an on-line drive by moving the cursor to the desired drive and pressing [+].

7. **Select Source Directories**: Move the cursor to highlight the C drive, using the [↑] and [↓] keys. Press [↵]. The directories and subdirectories on the hard disk will be displayed. See **Figure 3–4**.

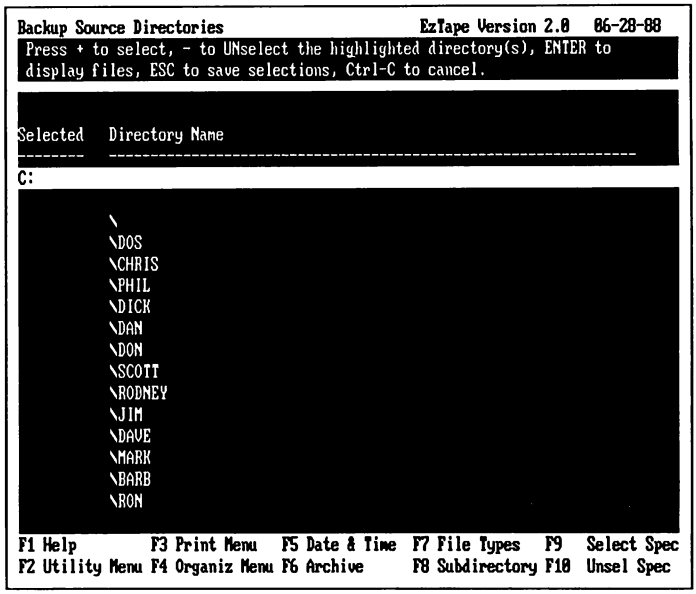


Figure 3–4
Backup Source Directories Screen

The [+] key is used to select the entire contents of a directory. The [-] key is used to UNselect the contents of a directory. You can select as many of the displayed directories as you like or you can go on to the next step and display the files in the directories.

8. **Select Source Files**: Move the cursor to the directory you want to select files from, using the [↑] and [↓] keys. Press [↵]. The files contained in the directory will be displayed. See **Figure 3–5**.

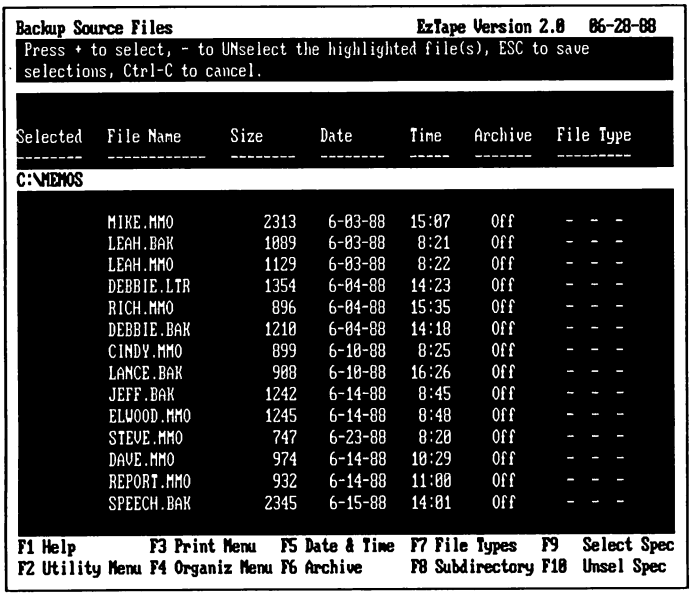


Figure 3–5
Backup Source Files Screen

Use + to select a file, or - to UNselect a file. When you first bring up the screen, all of the files are UNselected.

You'll see these symbols in the SELECTED columns of your backup source screens:

`**` --> Files were selected in the specified drive.

`All` --->
All files in the specified drive or directory have been selected.

`Some` -->
Some of the files in the specified directory have been selected.

( ) -->

Selection parameters may apply to this drive or directory, but no files meet them. No files have been selected.

---> The specified file has been selected.

The absence of any symbol in this column signifies no selection.

9. Pressing Esc saves your selections and displays the previous screen.

When you have finished making all of your file selections for backup, use Esc to save your selections and return to the previous menus.

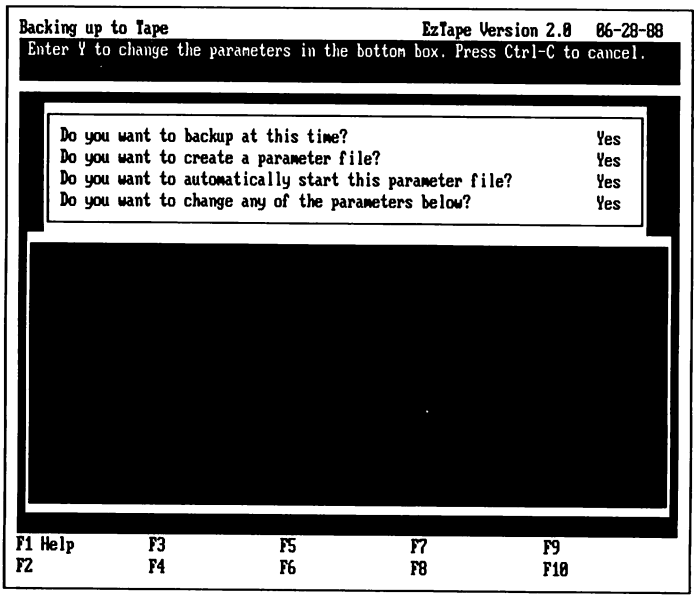


Figure 3–6
Backup Decisions Window

EzTape will display a window prompting for responses to the following:

10. **Do You Want to Do the Backup?**

    If you answer yes and press [↵], the backup will be performed as soon as all of the following questions are answered.

11. **Do You Want to Create a Parameter File?**

    Even if you answer no to the first question, **EzTape** gives you an opportunity to create a file in which the parameters for the selections you just made can be saved. That way, whether you do the backup now or not, you can run the backup later without entering the selections again. If you answer yes and press [↵], a parameter file is created which can be run automatically.

    If you answer no to both of the above questions, the Backup Menu is displayed. No backup will take place; and no parameter file will be created.

12. **Do You Want to Automatically Start this Parameter File?**

    If you answer yes and press [↵], the backup can be performed automatically on a day and time you specify.

13. **Do You Want to Change Any of the Parameters Below?**

    A new window is displayed in the bottom portion of the screen which shows additional parameters and their default values.

    If you answer no and press [↵], the backup and/or the creation of your parameter file will take place. When the backup is complete, you will be prompted to press any key to continue.

    If you answer yes (the default) and press [↵], your cursor highlighting moves to the window which displays the other parameters and their default settings. You can change any of them.

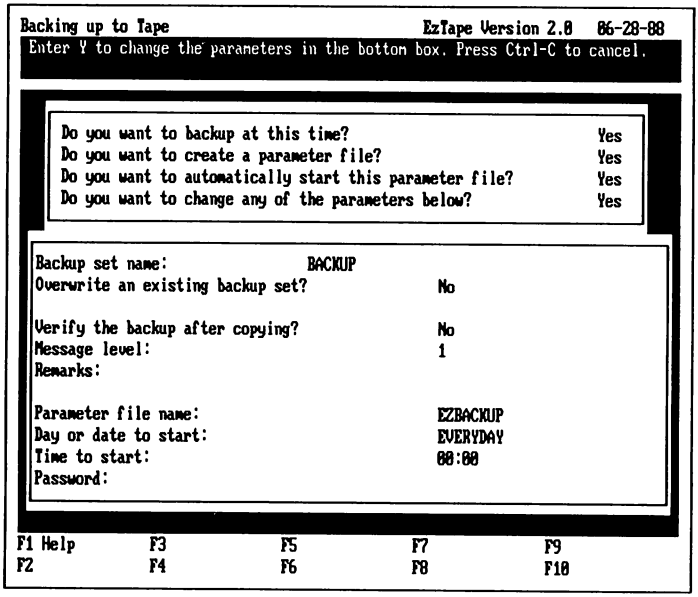


Figure 3-7
Backup Parameters Window

14. Backup Set Name

The name of the backup set on the tape can be characters or numerals, up to 31 long. If you have more than one backup set with the same name on one tape, **EzTape** automatically adds a sequential number to the name. Thus, you might have BACKUP, BACKUP-1, and BACKUP-3 on the same tape.

15. Overwrite an Existing Backup Set?

If there is a backup set already on the tape which you wish to overwrite, answer yes here.

> **NOTE:** If you overwrite a backup set, the data in the old backup set is lost.

If you answer yes and press [↵], the cursor moves to the next question.

16. **Name of Backup Set to Overwrite**

    Enter the name of the backup set (and its numeric extension) you wish to overwite. The data from the old backup set will be lost!

17. **Verify the Target after Copying?**

    Verifying backed up data means that a byte-for-byte comparison will be performed between the tape after the data has been written to it and the same data on the hard disk. The verify procedure is optional since Irwin ensures data integrity with it's patented **EC/Tape**^{TM} error correction method. However, if you want to specify a verify of your backed up data, enter yes and press [↵]. (If you have a 10mb **BACKUP** unit, a verify will automatically be performed since the unit does not support **EC/Tape**.)

18. **Message Level**

    Enter 0 to see minimal status messages during backup. Enter 1 (the default) to see messages with normal detail. Enter 2 to get more detailed descriptions of what's happening.

19. **Backup Remarks**

    Enter comments about the backup set, up to 127 alphanumeric characters. When you want to restore the files later, the remarks you make can be viewed to help you locate the particular files you need.

20. **Password**

    If other people should not have access to the information you are backing up, enter a password for the backup set. The password can be up to 15 alphanumeric characters in length. Press [↵] after entering the password.

    Be sure to enter a password that you can remember! **EzTape** will ask you for the password when you attempt to restore files from the backup set. If you forget the password, you will not be able to restore the files. Remember the case of the password also. If the password you type is `topsecret`, **EzTape** will not accept `TOPSECRET`.

NOTE: If you are making a parameter file, you should know that EzTape will not use the password in the parameter file.

21. **Parameter File Name**

    Enter a name using up to eight characters or numerals. **EzTape** automatically gives the parameter file a `.BPF` (Backup Parameter File) extension.

22. **Day or Date to Start**

    If you specified that you wanted to have automatic backup using this parameter file, the day or date parameter will be displayed. Enter the day or date you want **EzTape** to start the backup.

    Use these abbreviations:

`Mon`	Monday
`Tue`	Tuesday
`Wed`	Wednesday
`Thu`	Thursday
`Fri`	Friday
`Sat`	Saturday
`Sun`	Sunday
`Weekdays`	Mon through Fri
`Everyday`	Mon through Sun
A valid date	That date only.

    When entering the date, use this form: `08-16-87` (for August 16, 1987). **EzTape** can accommodate dates from 1-1-80 to 2079.

23. **Time to Start**

    This parameter will also be displayed if you specified automatic start for this parameter file. Enter the time you want **EzTape** to start the backup. Use this form:

    08:00 (for 8:00 AM)
    15:53 (for 3:53 PM)

    The time can be from 00:00 (midnight) to 23:59 (11:59 PM).

Once you have answered the questions outlined above, press Esc. **EzTape** will perform the backup, if you specified it. It will also create the parameter file at this time.

3.2 Selecting Files for Restore

You can make individual restore selections at any of four levels:

DRIVE

BACKUP SET – A backup set is the group of files backed up during the execution of a single **EzTape** backup.

DIRECTORY/SUBDIRECTORY

FILE

From the main menu and with the cursor highlighting `Restore`, press ↵. The Restore Menu is displayed (see **Figure 3–8**).

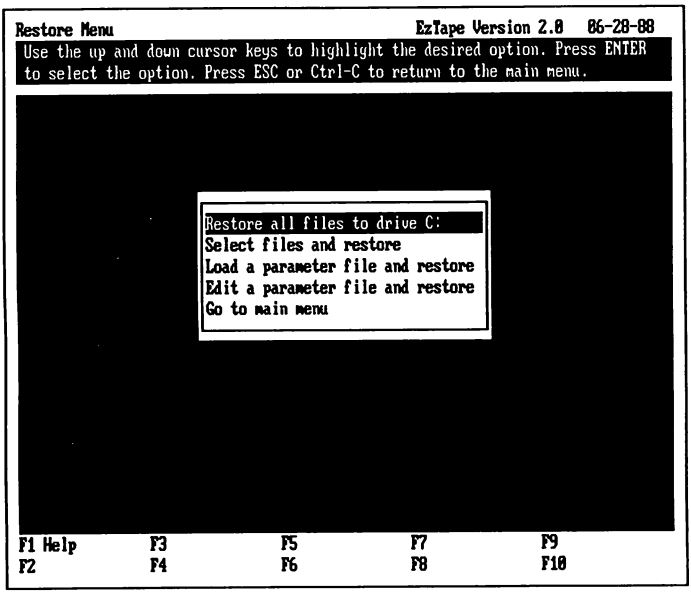


Figure 3–8
Restore Menu

The principles used for selecting files during restore are the same as those used during backup. Use the [+] key to make selections, and the [-] key to UNselect files.

When you have completed the selection process, use the [Esc] key to save the selections and exit to perform the restore. The Restore Decisions window will be displayed. There are fewer parameters to specify during a restore operation. They are similar to the backup parameters, with several exceptions.

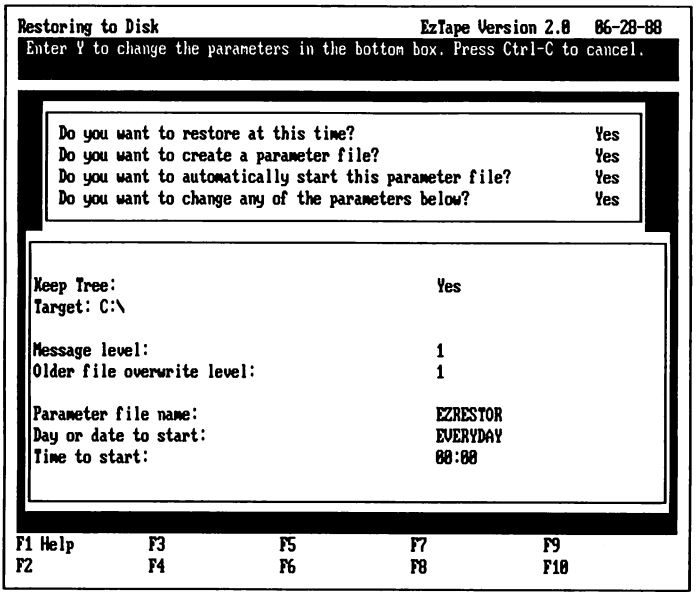


Figure 3–9
Restore Parameters Window

Keep Tree

When **EzTape** makes a backup of data on your hard disk, it makes a record of the tree structure of directories, subdirectories, and files. That way, it can restore a file to its proper place within the tree structure.

It is possible that you do not want to preserve the tree structure of certain files that you are restoring. You may simply want to restore a particular file to a new directory. In this case, you would specify the new target (see below) and answer no to Keep Tree.

In another example, you have a directory called \WORDS, from which you run a word processing application. This directory has several subdirectories. One of the subdirectories is called \WORDS\LETTERS. It contains letters. Another of the subdirectories is called \WORDS\MEMOS, containing memos. You make a backup of \WORDS and its subdirectories. **EzTape** will keep track of the organization.

Then you decide that it would make things a lot easier if memos and letters were all in the same directory. In this case, you could use the Target Parameter to specify a subdirectory, \WORDS\CRRSPNDC. You would answer no to the `Keep Tree` entry. The result of the restore of this particular backup, \WORDS, would be that \WORDS\MEMOS and \WORDS\LETTERS would now be merged into one subdirectory, \WORDS\CRRSPNDC. Whatever directory you name in the target will hold the merged files.

NOTE: **It's important to remember that if you decide not to keep the tree structure, any files that you will be merging into one directory must have unique names. If some of your files in the different directories have identical names, some files will be overwritten.**

Therefore, if you have identically named files in different selected directories, you should always say yes (the default) to `Keep Tree`.

Target

The target is the place on the hard disk to which you want to restore the data.

First, specify the hard disk to which you want to restore files. If you have only one hard disk, it is probably called C:. This is the default value. If you have more than one hard disk, specify the letter identifying the disk to which you want to restore files.

Next, specify the path. The default value displayed is the root directory of the hard disk (\ ). Change this if you intend to restore files to a different directory than the one from which they were backed up. Enter the full path name. Directories and subdirectories are separated by a \.

For example, if you made a backup of a file from the `\PROJECT` directory and you now wanted to restore it to a subdirectory called `\ONE` in a directory called `\TASK`, you would enter `\TASK\ONE` for this entry in the Target Window.

The Target parameter works in conjunction with the Keep Tree parameter. Thus, in the preceding example, if you use the keep tree default value (yes), the file would be restored to the following path: `\TASK\ONE\PROJECT\filename`. If you elect not to keep the tree for the same example, the file would be restored to the following path: `\TASK\ONE\filename`.

Using the TAB Key

You can also specify target information while you are in restore file selection. If you enter any of the Restore Source screens and press [→|], a window is displayed, as shown in **Figure 3–10**.

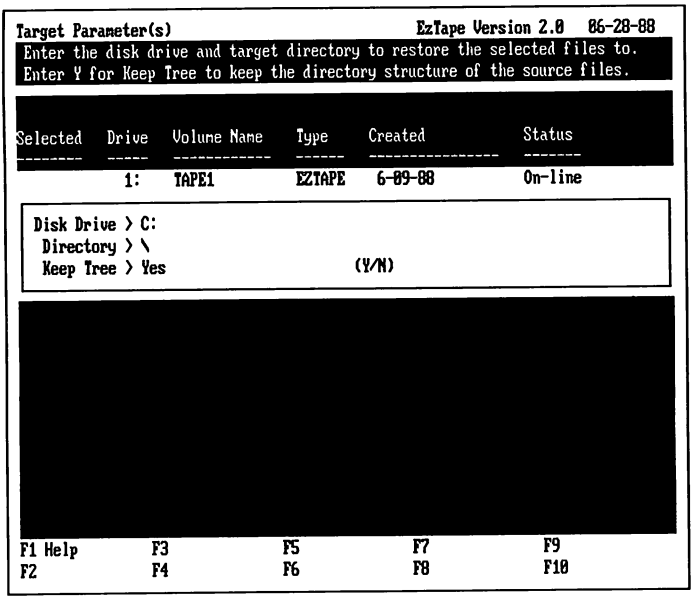


Figure 3–10
The Target Window During Restore

The target parameters are the same as described above. If you change any of them, do it before making your file selections.

Older File Action

You probably have some files on the tape that have the same names as files on the fixed disk. If you modified those files on the fixed disk sometime after the last backup, you probably do not want to restore the older versions from the tape, since they would overwrite the newer versions on the disk. On the other hand, the disk version of the file might have been damaged and you may deliberately want to overwrite it with the tape version.

- **Option 0**: tells **EzTape** to go ahead and restore the selected older files from the tape without asking your permission.
- **Option 1**: tells **EzTape** to ask you for confirmation each time it is about to overwrite a newer disk file with an older tape version of the same name. This is the default value.
- **Option 2**: prevents **EzTape** from overwriting any disk files.

If you are making a parameter file that will be run automatically and unattended, you may not want to use the default value.

Once you have specified your parameters, press [Esc]. **EzTape** will perform the restore. It will also create the parameter file at this time.

When the restore is completed, you are prompted to press any key. Then, the Restore Menu is displayed.

Passwords during Restore

If the files that you are restoring are part of a backup set that has been protected with a password, **EzTape** will prompt you to type in the password before it proceeds with the restore. You will have three opportunities to type in the correct password. After the third try, **EzTape** will skip that backup set and proceed to any other backup sets you may have selected for restore. If there are no other backup sets, **EzTape** will end the backup process. If you don't know the password and want to skip the backup set anyway, just press [↵] when the prompt comes up.

When typing in the password, remember that **EzTape** is sensitive to the case. That is, if the password was originally typed in as `topsecret`, **EzTape** will not accept `TOPSECRET`.

NOTE: If you are performing a restore using a parameter file, you should know that the restore will not complete without a user response to a password prompt.

Backup Set Remarks

You can use the F4 key from the Restore Source Backup Sets, Restore Source Directories, or Restore Source Files screens to call up the comments you made about a backup set.

Chapter 4: Advanced File Selection – Using Function Keys

For more powerful file selection capabilities, and for some **EzTape** utilities, use the function keys that are available when you choose the `Select Files` option from the Backup or Restore menus.

4.1 EzTape Utilities

The Utilities Menu is accessed by pressing [F2] within any of the backup or restore source menus. It is also accessed from **EzTape**'s main menu, by pressing [U].

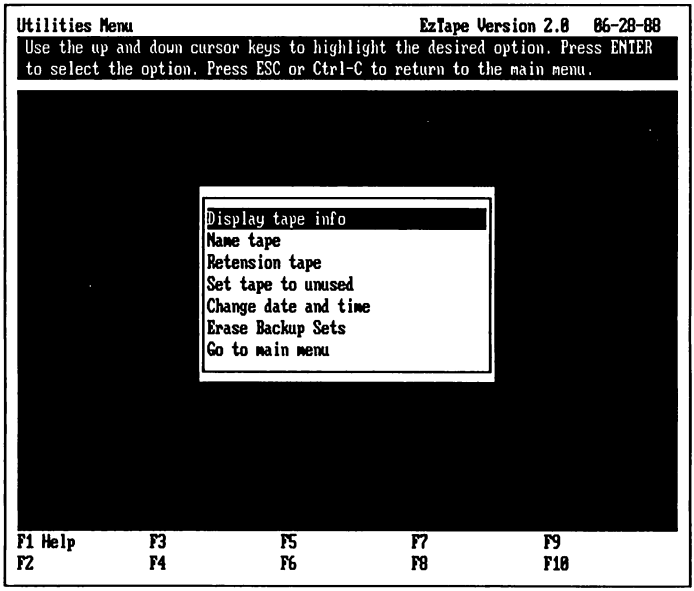


Figure 4–1
The Utilities Menu

Once the Utilities Menu is displayed, move your cursor to the desired option using the ↑ and ↓ keys, then press ↵.

Display Tape Info

This option will display tape information as shown in **Figure 4–2**. This is a display only; the information cannot be edited.

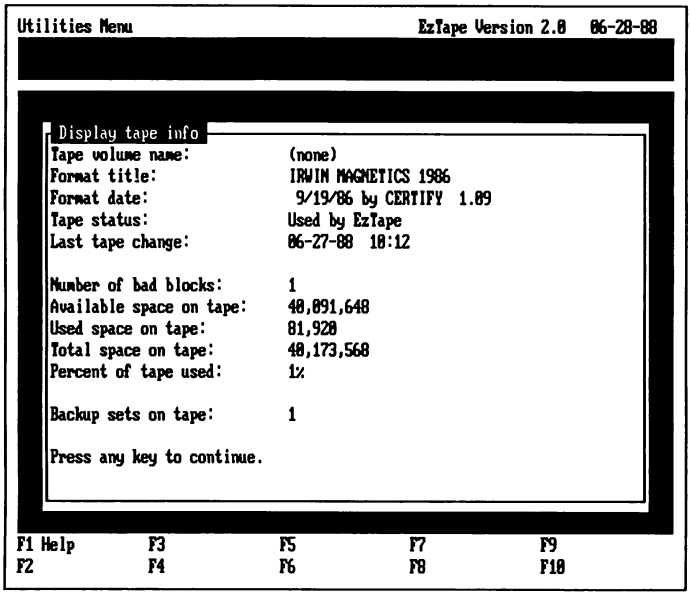


Figure 4–2
Display Tape Info

Press any key to return to the Utilities Menu.

Name Tape

You are prompted to enter a volume name for the tape. If a volume name already exists, it is displayed. **EzTape** asks you if you wish to change the existing name.

If you do not wish to change an existing name, press [↵] to accept the default answer, no. **EzTape** will automatically return you to the Utilities Menu. If you do wish to change the name, enter [Y].

Enter a name for the tape, using any keyboard characters, up to 31 characters long. Then press [↵]. When the operation is finished, press any key to return to the Utilities Menu.

Retension Tape

The tape spools from end to end, pauses, then spools back. This aligns a tape that has not been used for a long period of time or one that has been exposed to temperature extremes. It takes about one minute. When it is finished, press any key to return to the Utilities Menu.

Set Tape to Unused

When you select this option, any data that you already have on the tape will be overwritten. **EzTape** marks the tape as being unused. The tape will still be initialized after this operation, so you can immediately perform a backup with it if you wish. Select this option if you no longer have any need for the backup sets on the tape, and you wish to re-use the tape.

When this option is selected, EzTape asks you to confirm the operation, since any data already on the tape will be destroyed if it is performed.

If you're not sure, press [↵] to accept the default response - no. **EzTape** automatically returns to the Utilities Menu. If you are sure, enter [Y].

Setting the tape to unused takes less than a minute. When it's finished, press any key to return to the Utilities Menu.

Change Date and Time

The `Change Date and Time` option allows your DOS date and time to be changed, without leaving the **EzTape** program. The new date and time you enter will reset the clock. If your date and time are set properly, your backup sets will accurately reflect on which date and at what time they occurred.

Changing the date and time through **EzTape** will affect the DOS date and time until you reboot, or turn your computer off, or reset the date and time again. If you have a clock/calendar card, the date and time will remain reset.

You should refer to your DOS manual for more information about DOS and setting your computer's date and time.

When you select the date and time option, a window appears which displays your system date and time. Enter the date using two digits for each field. For example, August 4, 1987, would require you to enter 080487. **EzTape** automatically enters the dashes. Then press [↵].

Enter the time using a 24 hour clock, and using two digits for each field. For example, if you wish to enter 8:00 AM, type 0800. If the time you wish to enter is 1:30 PM, you would type 1330. **EzTape** automatically enters the colon. Then press [↵].

Erase Backup Sets

The `Erase Backup Sets` option allows you to delete individual backup sets from a tape without setting the entire tape to unused. By deleting some of the backup sets, you can make space available for new backups sets while you can still keep other existing backup sets on the tape. If you want to remove all of the backup sets on a tape, use the Utilities option, `Set Tape to Unused`.

When you select this option, a list of the backup sets on the tape is displayed. Use the cursor keys to move up and down the list. Mark backup sets for deletion using the [+] key. Use the [-] key to exclude selected backup sets from the deletion. Once you have marked the backup sets, press [↵] or [Esc]. You have two opportunities to cancel the operation.

Once you confirm this operation, **the data in the backup sets that you marked for deletion will be lost.**

You can use the [F4] key from the Erase Backup Sets screen to call up the comments you made about a backup set.

If the backup set you are deleting spans more than one tape cartridge, **EzTape** will prompt you to insert the next volume. If the next tape is unavailable, press [Esc] to leave the operation. If you have a partial backup set left on a tape, it can be deleted at a later time.

WARNING: It is possible to restore files from backup sets that have been partially deleted. If the first or last file in the backup set is split between two tape volumes, restoring that file will destroy the original file. Restoring files from partially deleted backup sets is not a recommended practice.

4.2 Printing EzTape Reports

EzTape has a convenient feature which allows you to obtain several different types of printed reports of the directories or files on your hard disk or tape. This feature can be utilized whenever you are using the file selection menus for backup and restore, by pressing [F3]. The print menu is shown in Figure 4–3.

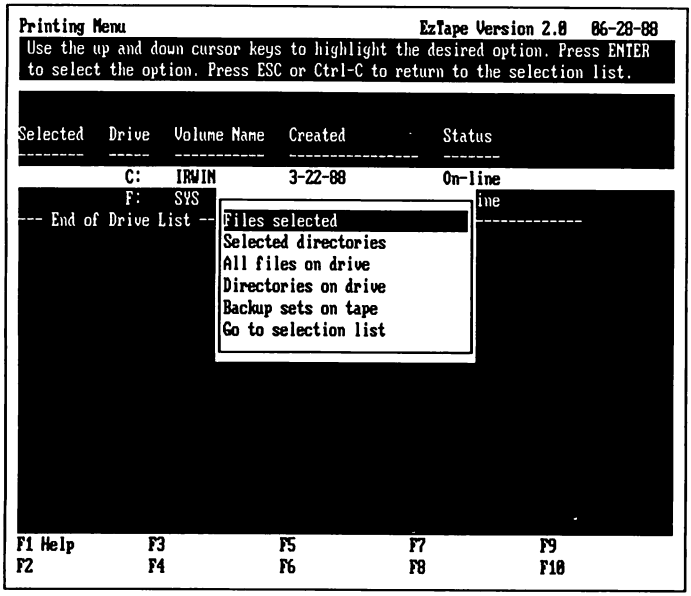


Figure 4–3
The Print Menu

To make a selection, move your cursor to the option you want using the [↑] and [↓] keys. Then press [↵]. Before you make your selection, make sure that your printer is connected and turned on. Move the paper so that the report can start at the top of the page.

When you print files from the backup screens, the source is the hard disk. When you print files using the restore screens, your printed reports will be generated from the tape data. The exception to this is the option to print backup sets on tape, which is the same from either backup or restore screens.

Files Selected

Prints a list of the files you have marked for selection.

Selected Directories

Prints a list of the directories you have marked for selection.

All Files on Drive

This option, when chosen from backup file selection, prints a report of all the files on your hard disk, organized by directory. When chosen from restore file selection, it prints a report of all the files on the tape.

Directories on Drive

Prints a report showing every directory and subdirectory on your hard disk if you are in file selection for backup. If you select the option from restore file selection, it prints a list of every directory and subdirectory represented on the tape.

Backup Sets on Tape

Prints a report of the backup sets on your tape cartridge. You can select this option from either the backup or restore selection screens.

4.3 Organizing your Hard Disk with EzTape

Within any of the backup source menus, press [F4] to display the Organize Menu (see **Figure 4–4**). Move your cursor to the desired option using the [↑] and [↓] keys, then press [↵]. When the operation has been completed, press any key to return to the Organize Menu. Press [Esc] to return to the backup source screens.

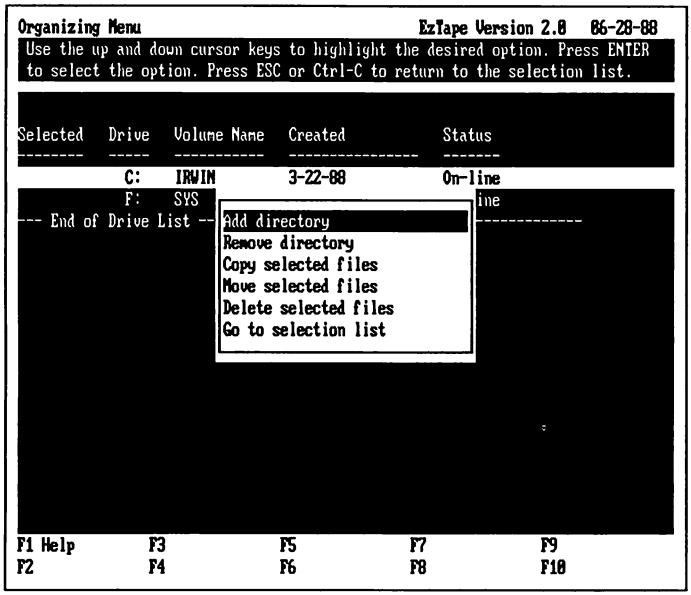


Figure 4–4
The Organize Menu

With the exception of the `Delete Selected Files` option, when an option is selected you will be prompted to enter the name of a directory (see **Figure 4–5**). Use the same format you would in DOS. Press [↵] after entering the name. (If an option has been selected, but you wish to exit without executing the option, press [CTRL] and [C] to return to the Organize Menu.)

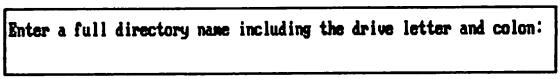


Figure 4–5
Organize Window

Add Directory

Enter the name of the directory you want to make on the hard disk.

Remove Directory

Enter the name of the directory you want to remove from the hard disk. Your cursor must not be positioned on the directory you intend to remove.

EzTape will not remove a directory unless all of the files in the directory have been removed first.

Copy Selected Files

Files can be copied as a group into a different directory on the hard disk. Files can be copied from different directories at the same time as long as they will all be copied to the same destination.

Before you select this option, make your file selections using the [+] and [-] keys and the selection parameters. The date and time feature, archive switch, file types, subdirectories, and select and UNselect specifications can be used to designate files to be copied.

The files will have the same names as the files they were copied from. The new files will be marked for selection if they meet your selection qualifications.

Move Selected Files

Files can be moved into a different directory on the hard disk. Files from different directories can be moved at the same time as long as they will all be moved to the same directory.

Before you select this option, make your file selections. The date and time feature, archive switch, file types, subdirectories, and select and UNselect specifications can be used to designate files to be moved.

The files will be copied into the specified directory. Then, they will be deleted from the original directories.

The files will be marked for selection if they meet your selection qualifications.

Delete Selected Files

Before you select this option, make your file selections. The date and time feature, archive switch, file types, subdirectories, and selection specifications can be used to designate files to be deleted.

A confirmation message will be displayed (see **Figure 4–6**). If you answer no, the Organize Menu will be displayed. If you answer yes, the confirmation message is displayed again, in capital letters. (That's just in case you were typing faster than you were thinking.) If you answer yes, the selected files will be deleted from the hard disk.

If you delete the entire contents of a directory, you will still need to use the `Remove Directory` option to delete the directory entry on your hard disk.

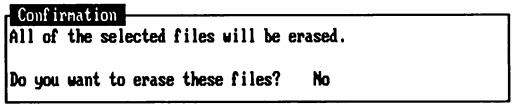


Figure 4–6
Delete Selected Files Confirmation

4.4 Date and Time Parameters

The files on your hard disk are stamped with the date and time they were created or modified. You can back up files using the date and time stamp. For example, you might want to back up files created or modified since the first of the month.

The F5 key works only in conjunction with the F9 or F10 keys.

1. Press F5 to make your date and time specifications.
2. Then, press F9 to specify the files that should be included in the selection.

The Date and Time Window

When you press F5 from the Backup or Restore Source screens, a window is displayed on your screen. See **Figure 4–7**.

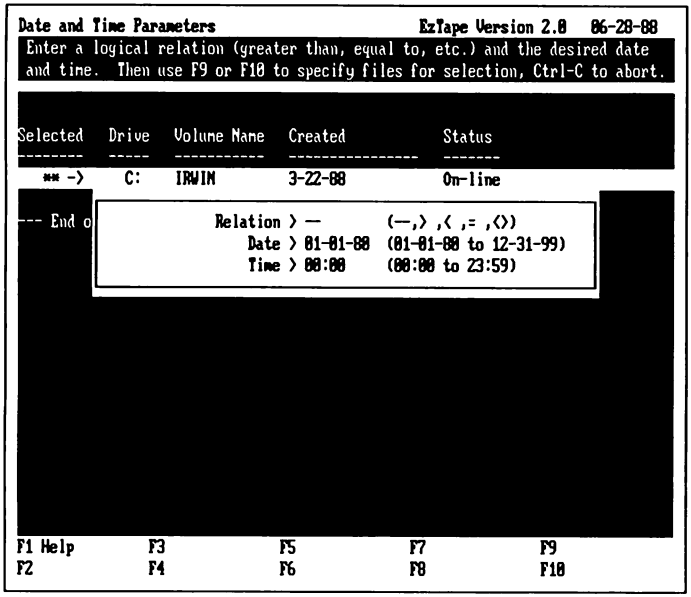


Figure 4–7
Date and Time Window

Relation

Enter one of the following:

–	No relation.
>	Select only files created or modified since the date and time you specify.
<	Select only files created or modified before the date and time you specify.
=	Select only files with a specific date.
<>	Select only files that have date stamps different from the ones you specify.

Date

Enter a date to be used in making this comparison. Use this form:

01-01-80 for January 1, 1980

EzTape accommodates dates from 1-1-80 to the year 2079.

Time

Enter the time to be used in making the comparison. The time can be from 00:00 (midnight) to 23:59 (11:59 PM). Use this form:

08:00 for 8:00 AM
15:53 for 3:53 PM

Press [↵] after you have entered your date and time specifications.

Date and Time during Restore

The date and time parameter works the same way during restore as it does during backup. This means you can select files from the tape based on the date and time they were stamped with on the hard disk, at the time they were backed up. From the Restore Source screen, you can specify a relation, date, and time using [F5]. Then use [F9] to specify which files to include in the restore.

An Example

Here is an example which shows how to back up every file on the hard disk which has been created or modified since July 1, 1987.

1. From the Backup Source Drives menu, press [F5].

2. Enter > for relation, press [↵].
   Enter 07-01-87 for date, press [↵].
   Enter 00:00 for time, press [↵].

3. Press [F9]. The default value for file specification is *.* which means "include everything."

4. Press [↵] to accept the default value.

5. Press [Esc] to return to the Backup Menu. After you make your backup decisions, the backup begins.

4.5 Archive Parameter

The Archive Parameter is used for making backups of files that have been created or modified since the last backup.

The archive switch, or archive bit, is set by your computer's Disk Operating System. When a file is created, the archive bit is turned on. Similarly, when you modify a file, the archive bit is turned on.

You can instruct **EzTape** to turn the archive switch for each file to off after it has completed backing up. That way, the next time **EzTape** looks for the files that have changed, it ignores the ones that have their archive switches turned off.

Another way that **EzTape** utilizes the archive switch is during restore. You can tell **EzTape** to restore only those files that had their archive switches turned on at the time of the backup to restore the files most recently backed up.

The F6 key works only in conjunction with the F9 or F10 keys.

1. Press F6 to make your archive specification.

2. Then, press F9 to specify the files to include in the selection.

The Archive Window

When you press F6 from the backup or restore source screens, a window is displayed. See **Figure 4–8**.

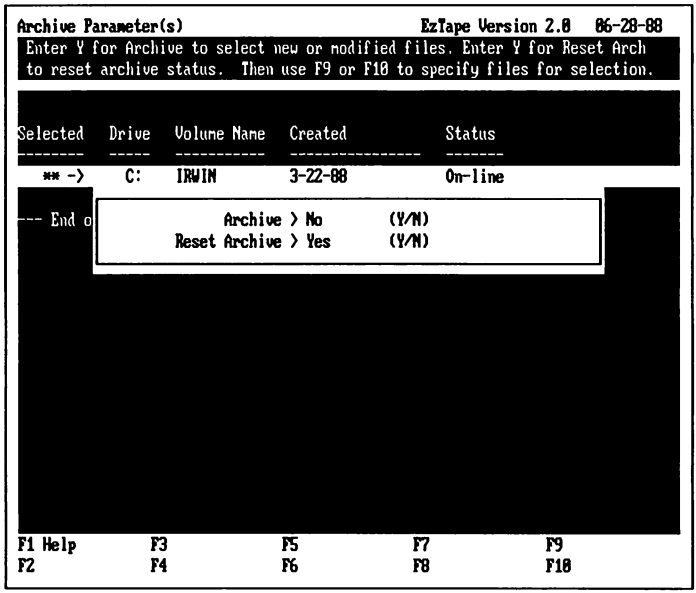


Figure 4–8
The Archive Parameter Window

For each entry, the available choices are displayed on the right. The answers can be only yes or no.

Archive

This indicates whether you wish to capture files regardless of how their archive bits are set; or whether to back up only files that have changed – that is, their archive bits are on.

If you answer no, the default value, **EzTape** will back up files regardless of whether they have changed since the last backup.

If you answer yes, **EzTape** backs up only files that have been modified or created since the last backup.

Reset Archive Switch

This lets you reset the archive switch after a backup.

If you answer yes, the default, then after **EzTape** saves a file on tape, it will reset the archive switch on the disk file to off. If you back up again soon and tell **EzTape** to back up only those files that have changed (archive = yes), **EzTape** won't back up the file.

If you answer no, **EzTape** will not reset the archive switch. You might want several backups of the same group of modified files. If so, you would not want the archive switch to be reset after the first backup. Then, after you have made multiple backups, you should reset the archive switch if you want effective backup of modified files.

Archive Parameters during Restore

You can use the archive switch during restore procedures, too. If you press [F6] from one of the Restore Source screens, the archive window is displayed. It isn't possible to reset the archive switch on the files contained on the tape, so that choice doesn't appear. However, if you answer yes to the archive switch, only files with their archive bits on at the time the backup was made will be selected for restore.

The archive switch defaults to no during restore. This means that **EzTape** will restore files regardless of whether they were new or modified at the time of the backup.

An Example

Here is an example which shows how to back up every file on the hard disk which has been created or changed since the last backup. (You already have a batch file, called `CHANGED`, that does this. See page 2–2.)

1. From the Backup Source Drives screen, press [F6].

2. Enter [Y] for archive. This tells **EzTape** to back up only files created or modified since the last backup.

   Enter [Y] (the default) for reset archive switch. This tells **EzTape** to reset the archive switch of the hard disk files to off, to signify that they've been backed up. The next time the file is changed, DOS will turn the switch back on.

3. Press [F9]. The default value for file specification is *.* which means "include everything".

4. Press [↵] to accept the default value.

5. Press [Esc] to return to the Backup Menu. After you make your backup decisions, the backup will take place. Only the new or changed files will be included in the backup.

4.6 File Types

Some of the files on your hard disk are designated as system files. You may have other files that are of the read-only or hidden types. The [F7] function allows for special handling of these file types.

The [F7] key works only in conjunction with the [F9] or [F10] keys.

1. Press [F7] to make your file type specification.

2. Then, press [F9] to specify the files to include in the selection.

The File Types Window

When you press [F7] from the backup or restore source screens, a window is displayed. See **Figure 4–9**.

For each entry, the available choices are displayed on the right. The answers can only be yes or no. During backup or restore, the default values for all three file types is `Yes`.

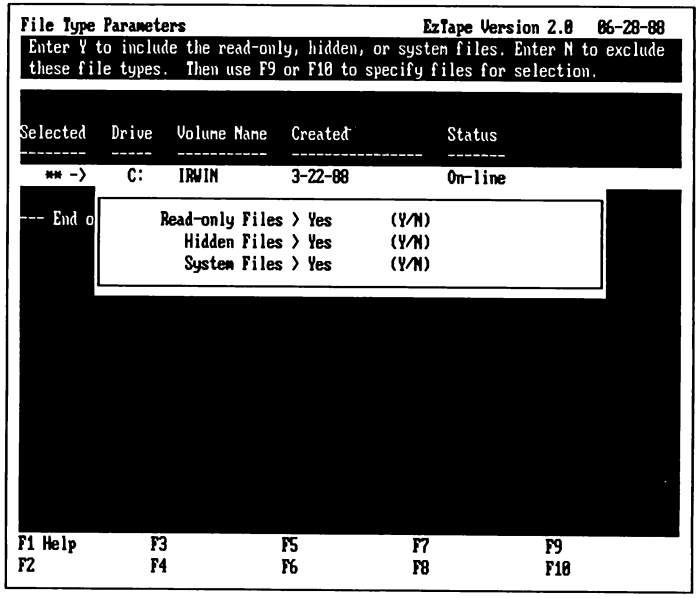


Figure 4–9
File Types Window

Read-Only Files

Read-only files on your hard disk are protected so that ordinarily they cannot be changed. When **EzTape** displays files for selection, read-only files are marked with an R in the last column.

Enter yes (the default) if you want read-only files included in your file selections. Enter no to ignore read-only files during this backup or restore.

Hidden Files

Hidden files are special files which do not appear in any directory. The DOS system files are also hidden files. During **EzTape** file selection, hidden files are marked with an H in the last column.

Enter yes (the default) to include hidden files in file selections. Enter no to ignore hidden files during this backup or restore.

System Files

DOS system files contain the information that your computer needs to operate with. Consult your DOS manual to learn more about system files. These files must always occupy a special place on the hard disk. System files are files that you want to be sure to have a backup of. When **EzTape** displays files for selection, system files are marked with an S in the last column.

Enter yes (the default) to include system files in your file selections. Enter no to ignore system files during this backup or restore.

Hidden and System Files during Restore

You should be aware that **EzTape** restores files marked both hidden and system to their original locations on the hard disk. This protects most copy protected files.

When restoring these types of file, EzTape may have to find different places for other files that you are restoring at the same time. Run CHKDSK before performing a restore that includes system files to be sure that any errors in the hard disk directory or file allocation table are corrected. Consult your DOS manual for more information about the CHKDSK command.

It's also important to note that, while EzTape can restore most copy protected files, there may be cases in which it is not possible for EzTape to ensure the safe restore of files copy protected by other methods.

An Example

Here is an example which shows how to include your system files in a backup. The read-only and hidden files will not be included.

1. Load the **EzTape** program.

2. From the Backup Source Drives screen, press [F7].

3. Enter [N] for read-only files.
   Read-only files will not be backed up.

   Enter [N] for hidden files.
   Hidden files will not be backed up.

   Enter [Y] for system files.
   System files will be backed up.

   Press [↵].

4. Press [F9]. The default value for file specification is *.*, which means to include everything.

5. Press [↵] to return to the backup screen. After making your backup decisions, the backup begins.

4.7 Subdirectories

EzTape automatically includes your subdirectories in the selection process.

If you do not want to include subdirectories automatically, you can change it. Press [F8]. You will see a window like the one in **Figure 4–10**.

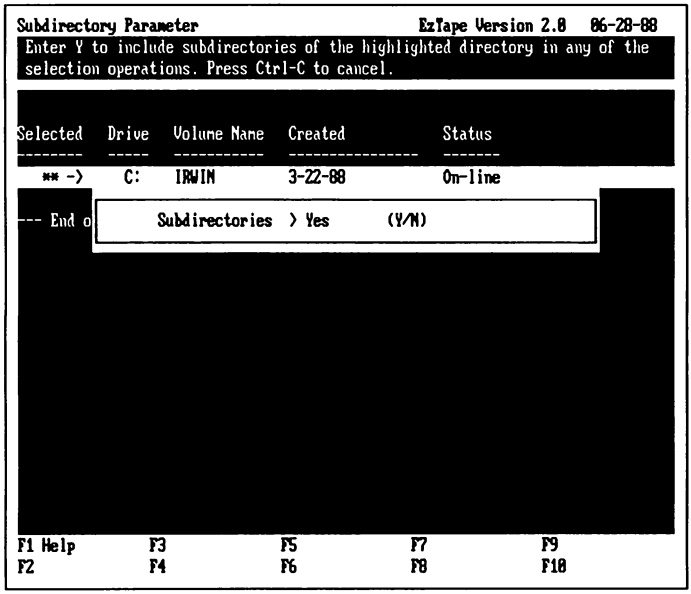


Figure 4–10
The Subdirectories Window

If you answer no, subdirectories will not be automatically included in your selections. If you answer yes, subdirectories will be included.

If you have a monochrome monitor, when subdirectories are included, the first directory is highlighted and the subdirectories are underlined. If you have a color monitor, the first directory is highlighted and the subdirectories are grouped by another color.

Note: If you have a monochrome monitor with a color display adapter, you may improve the contrast of the **EzTape** display by using the **/g** parameter when you run **EzTape**. Simply type **EZTAPE /g** at the DOS prompt when you want to start the **EzTape** program. This parameter is also discussed in the Command Line chapter.

If your subdirectory switch is set to include all subdirectories and you UNselect a directory containing subdirectories, all of its subdirectories will be UNselected too.

The subdirectories switch works the same way during restore, but it looks at the directories and subdirectories on the tape instead of the hard disk.

4.8 Select Specifications

F9 provides the ability to make file selections using the wildcard characters, * or ?, or using individual file specifications. F9 is also the function key that ties the parameter selections together.

Using Select Spec for File Specification Only

When you press F9, a window is displayed on your screen, as shown in **Figure 4–11**.

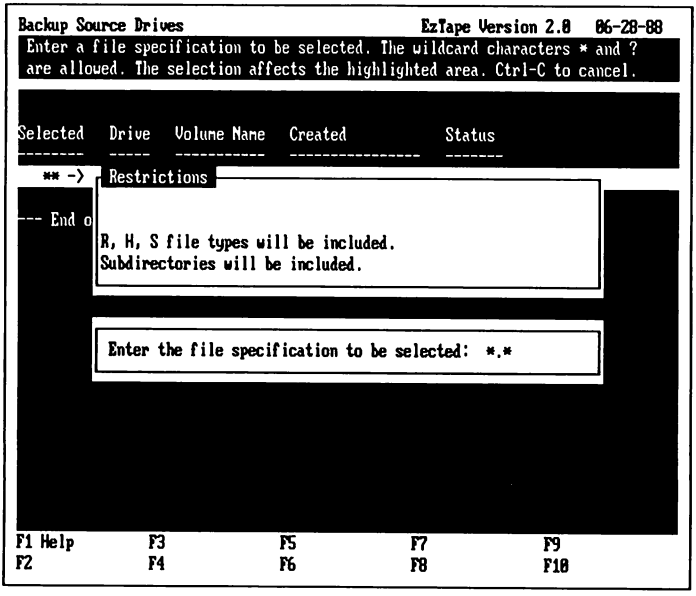


Figure 4–11
Selection Specification

There is also a window which displays what restrictions may have been placed on this selection. The restrictions window always displays whether the subdirectories switch is on or off.

When using the file specification feature, you must enter the complete DOS file specification for the files you want to select. You can use the * and ? wildcard characters.

A complete DOS file specification consists of a filename of up to eight characters, plus an extension of up to three characters. There is a "." between the filename and the extension. A file does not have to have an extension.

You can use "?" to take the place of one character in the filename. The "?" means that any character could be accepted in that position. For example, TEST? would accept TEST1, TEST2, or TESTA in a file specification.

You can use "*" to take the place of all the rest of the characters in a filename or extension. For example, TEST* would accept TEST1, TEST10, TESTXY, or just TEST. The file specification, *.*, includes all files that fit the qualifications displayed in the restrictions window.

If you press [F9], and then decide you do not want to specify any files, hold down [CTRL] and press [C] to return to the previous menu.

Using File Specification with other Parameters

When using other parameter specifications, the [F9] file specification must be used in order to define the group of files on which to place those parameters.

The other parameters which require the use of the [F9] key after their selection include:

[F5] DATE AND TIME
[F6] ARCHIVE
[F7] FILE TYPES

Each of these parameters is described in earlier sections. If you specify one, a few, or all of these parameters, you must follow their specification by using the F9 key.

An Example

This example shows how to back up the files with an .MMO extension in the word processing directory \TEXT and its subdirectories that have been created or modified since June 1st, excluding hidden and system files (but including read-only files).

1. From the Backup Menu, move the cursor to `Select Files and Backup`. Press ↵. The Backup Source Drives screen is displayed.

2. Press ↵ to display the Backup Source Directories screen.

3. Move the cursor to \TEXT. \TEXT and its subdirectories are highlighted since the subdirectory switch defaults to on – that is, subdirectories are automatically included.

4. Press F5 `Date and Time`.

5. For relation, enter >, and press ↵.
   For date, enter 06-01-87, and press ↵.
   For time, enter 00:00,and press ↵.

6. Press F6 `Archive`.

7. Press Y for Archive.
   Press Y for Reset Archive.

8. Press F7 `File Types`.

9. Press Y for Read-only.
   Press N for Hidden.
   Press N for System.

10. Now press [F9] `Select Specifications`. All of the qualifications that you just selected are displayed in the restrictions window.

11. In the area to enter `File Specification`, enter:

    `*.MMO`, and press [↵].

12. From the Backup Source Drives screen, if you now press [↵], the Backup Source Files screen is displayed and the files that meet all of the parameter criteria are marked for selection.

Selection Specifications during Restore

Selection specifications during restore work in exactly the same way but the selections apply to the files on the tape.

A Note about Selection Specifications

When you combine all the basic file selection techniques with the parameter and selection specifications, there's an incredible number of ways to specify a backup or restore. You'll want to experiment with the selection process and parameters to get a feel for exactly how they work.

4.9 UNselect Specifications

The F10 UNselect Specifications key is the counterpart to the F9 Select Specifications key. UNselect works the same way.

This feature lets you undo file selections using the wildcard characters, or using individual file specifications.

The F10 key, like selection specifications, also works in conjunction with the selection parameters.

Using UNselect Spec during File Specification

When you press F10, a window is displayed on your screen, as shown in **Figure 4–12**.

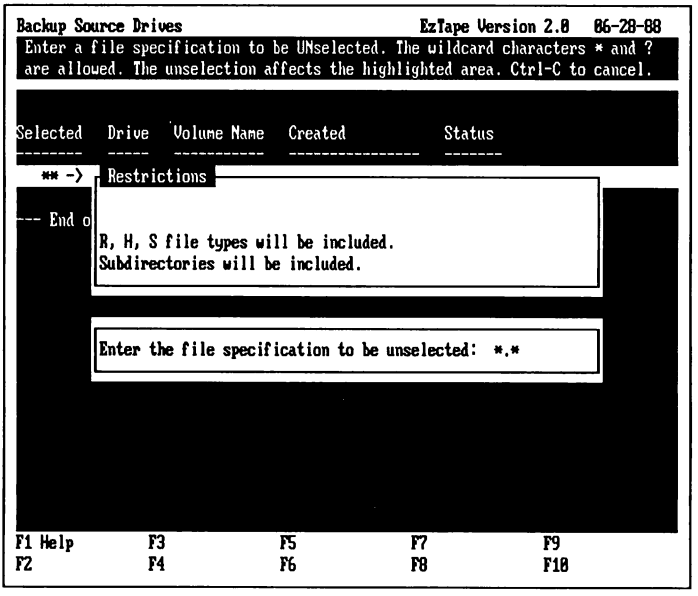


Figure 4–12
UNselection Specification

If you selected files using basic file selection or the [F9] key, [F10] can be used to unselect all or part of that selection.

If you press [F10], and then decide you do not have any files that you want to UNselect, hold down [CTRL] and press [C] to return to the previous menu.

Using UNselect with Parameters

If you used parameter specifications in conjunction with the [F9] file specification, you can use the [F10] key to UNselect files that meet that specification or that fit a different one.

The other parameters which can be included in an UNselect operation are the same as the ones for selection:

[F5] DATE AND TIME
[F6] ARCHIVE
[F7] FILE TYPES

Each of these parameters is described in earlier sections. If you specify one, a few, or all of these parameters, you must follow their specification by using [F9] or [F10].

An Example

This example will show how to exclude from the backup in the previous example all of the .MMO files that begin with TASK and that were dated June 15th. This example will show the entire process of selecting and UNselecting.

1. From the Backup Menu, move the cursor to **Select Files and Backup**.
   Press [↵]. The Backup Source Drives screen is displayed.

2. Press [↵] to display the Backup Source Directories screen.

3. Move the cursor to \TEXT.
   \TEXT and its subdirectories are highlighted since the subdirectory switch defaults to on; that is, subdirectories are automatically included.

4. Press [F5] `Date and Time`.

5. For relation, enter >, and press [↵].
   For date, enter `06-01-87`, and press [↵].
   For time, enter `00:00`, and press [↵].

6. Press [F6] `Archive`.

7. Press [Y] for Archive.
   Press [Y] for Reset Archive.

8. Press [F7] `File Types`.

9. Press [Y] for Read-only.
   Press [N] for Hidden.
   Press [N] for System.

10. Now press [F9] SELECT SPECIFICATIONS. All of the qualifications that you selected are displayed in the restrictions window (see **Figure 4–13**).

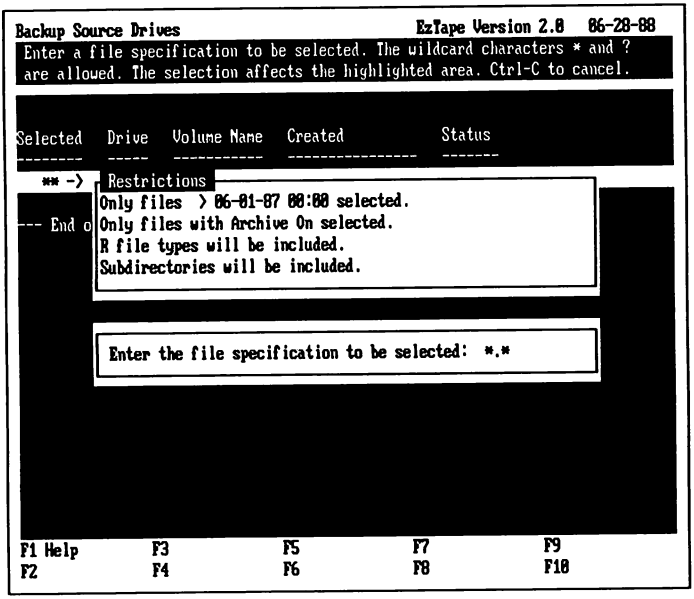


Figure 4–13
Example – Restrictions Window

11. In the area to enter `File Specification`, enter:

    `*.MMO` and press [↵].

12. From the Backup Source Drives screen, press [↵]. The Backup Source Files screen is displayed and the files that meet all of the parameter criteria are marked for selection.

13. To UNselect the files described earlier, press [F5] `Date and Time`.

14. For relation, enter =, and press [↵]. For date, enter `06-15-87`, and press [↵].

15. Press [F10]. The restrictions window will show that files with a date of `06-15-87`,

with archive on, and including read-only files that fit the specification can be unselected.

16. In the area to enter file specification to UNselect, enter:

    `TASK*.*` and press [↵].

17. The Backup Source Files screen displays the files that meet the parameter criteria for **`Select Specifications`**, but the files that meet the parameter criteria for **`UNselect Specifications`** are excluded.

18. Pressing [Esc] three times backs out of the selection process to the Backup Menu, where your final backup decisions are made.

UNselection Specifications during Restore

UNSelection specifications during restore work in exactly the same way but the UNselections apply to the files on the tape.

Chapter 5: Parameter Files

A parameter file is a string of **EzTape** commands. It contains all of the information required to run a customized backup or restore procedure. This shortcuts the file selection process.

Parameter files can be created automatically at the time you make backup or restore decisions. **EzTape** simply saves all the commands necessary to run the specified backup or restore. You can then run the parameter file as a batch file - at one command from the DOS prompt. You can also run the parameter file using **EzStart** - you don't even have to be present.

5.1 Making a Parameter File

When you back up or restore using the file selection process, **EzTape** asks a few questions before actually saving or restoring data. At that time you are prompted to specify whether you want to create a parameter file.

If you answer no when **EzTape** asks "Do you want to create a parameter file?", no parameter file will be created.

If you answer yes, **EzTape** will create a parameter file which you can use all the time to perform your backups or restores. The parameter file will automatically make the file selections that you manually specified. It will do this whenever you load the file from **EzTape**'s Backup Menu, or whenever you run the parameter file from a batch file in DOS.

EzTape will want to know if the parameter file is to be run automatically at a certain time and on which days. You have this ability with the **EzStart** feature that works with **EzTape**.

The other parameters will also be specified, such as the backup set name, whether an existing backup set is to be overwritten, the name of the backup set to overwrite, older file handling (on restore), and the name of the parameter file.

The name of the parameter file will be eight characters or numerals. **EzTape** automatically supplies an extension. If the parameter file runs a backup, the extension is .BPF (Backup Parameter File). If it runs a restore, the extension is .RPF (Restore Parameter File) . Each parameter file must have a unique name.

5.2 Loading a Parameter File

If you select **Backup** from the Main Menu, you will see the Backup Menu. The first two options on the Backup Menu were covered in previous sections. The third option is to **Load a parameter file and backup**. Press [L] to select this option.

A list of the available parameter files will be displayed. You'll notice they all have the .BPF or .RPF extensions.

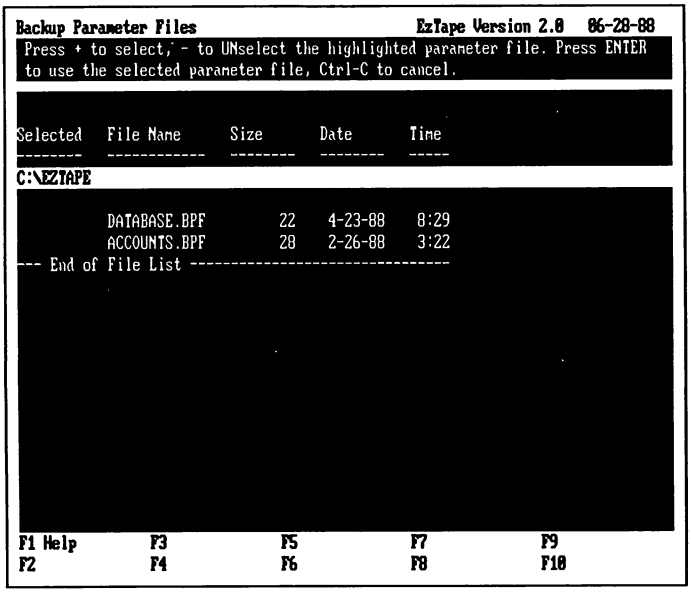


Figure 5–1
Parameter Files

To run a parameter file, all you have to do is move the cursor bar using the [↑] and [↓] cursor keys to the parameter you wish to load. Then, press [+] to select the file. The selection symbol is displayed in the left hand column. Press [↵].

When the backup is complete, you'll be prompted to press any key to continue.

Loading a parameter file works the same way in the Restore Menu as it does in the Backup Menu.

Loading a Parameter File from DOS

Whenever you create a parameter file, **EzTape** also creates a file with the same name but with a `.BAT` extension. This means that you can run your parameter file from the DOS prompt using just one word - the name of your parameter file.

1. Insert an initialized tape into your Irwin **BACKUP** drive.
2. At the DOS prompt, enter:

   `CD \EZTAPE` and press [↵].

3. Enter the name of the parameter file; then press [↵].

5.3 Editing a Parameter File

If you select `Backup` from the Main Menu, the Backup Menu will be displayed. You'll see an option in the menu called `Edit a parameter file and backup`. Press [E] to select the edit option.

The display is the same as during loading parameter files. You'll see a list of parameter files. Move your cursor bar to the parameter file you want to edit, and press [+] to select it. Then, press [↵].

Each time you press [↵] you will see one of the backup source screens. You will see which files are marked for selection. You can change them, or you can leave them as they are.

Parameter Files

It's important to note that EzTape only displays the file selections that meet your parameter criteria. It will not display the parameters that you placed on the selection using the [F5], [F6], [F7], [F9], and [F10] keys. The files selected by these parameters can be displayed, but the parameters themselves cannot.

Parameters cannot be viewed because it is possible to set the same parameters to different values depending on which directory you are in. For example, you could have set the archive switch to yes in the database directory, but it could be set to no in the word processing directory - all in the same parameter file. Therefore, **EzTape** does not display your archive parameter setting.

The parameters can be interpreted by reading the command string. You can type or print a listing of your parameter file. Then, refer to Chapter 9 to gain an understanding of the commands.

Chapter 6: EzStart

EzStart keeps track of **EzTape** functions and automatically tells your computer to perform them at the time you specify.

EzStart can run one of the standard batch files (`BACKALL`, `RESTALL`, `CHANGED`) that come with the system, or you can use parameter files you have created.

6.1 How to Use EzStart

This example will show you how to back up only the files that have changed since your last backup. It will be run by **EzStart** each weekday while you're at lunch, using a standard batch file supplied with the system, called `CHANGED`.

1. At the DOS prompt, enter:

   `CD \EZTAPE`, and press [↵].

2. Enter:

   `EZTAPE` and press [↵].

3. Press [S] to select the `Set Up EzStart` option. The **EzStart** setup screen is displayed. See Figure 6–1.

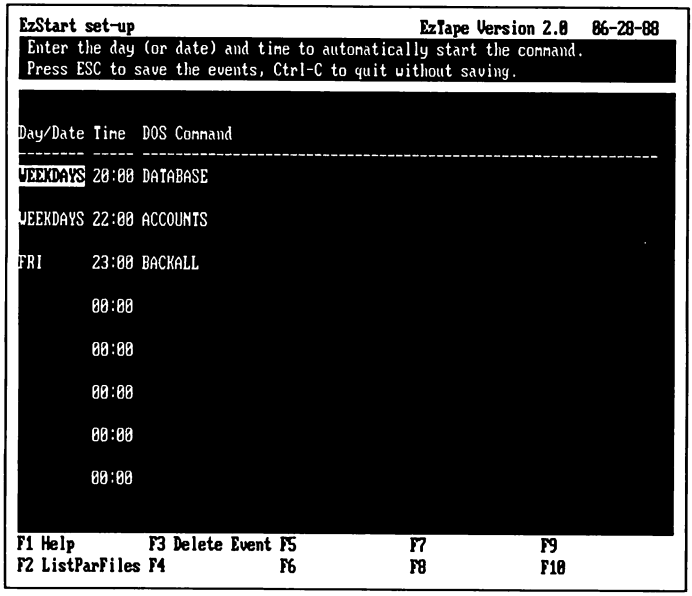


Figure 6–1
Set Up EzStart

4. If you have not used **EzStart** before, the cursor will be positioned on the first entry at the top of the left hand column on this screen. There is room on the screen to enter up to eight different **EzStart** commands, and eight is the limit of the number of commands **EzStart** can remember. A "command" is the name of an **EzTape** parameter file.

   During backup or restore, you might have specified parameter files to be run automatically. If so, you will see them on the **EzStart** screen.

   Enter the day you want the backup to occur. In this case, enter

   WEEKDAYS, and press [↵].

   The cursor will move to the column labeled `Time`.

5. Enter the time you want the backup to occur, using 24 hour notation:

   12:00 and press [↵].

   The cursor will move over to the third column, Command.

6. Enter the name of the standard batch file that will perform the operation you want:

   CHANGED

   CHANGED is the name of a batch file that comes with the **EzTape** software. It backs up only files that have been created or modified since the last backup.

7. Press [Esc] to save your entries.

8. You can now leave **EzTape** and use your system for other things.

Before 12:00 PM each weekday (Monday through Friday), you should make sure that there is an initialized tape in your tape drive. Leave your computer turned on. At 12:00 pm, the batch file called CHANGED will be executed.

If EzStart finds your computer system busy when it is time to do a backup, it will play a short tune and wait until the computer is available. It will play the tune every 5 minutes to remind you that it's waiting. When the computer is free, and the DOS prompt is displayed, EzStart will play a few different notes 30 seconds before it starts the backup. Then it will carry out the backup as specified.

You can use any parameter file with **EzStart**, not just the ones that came with **EzTape**. Be sure to enter the name correctly, since **EzStart** won't check for things like an invalid parameter file name until it tries to execute your command at the time you specified.

Here are some guidelines for the three fields in the **EzStart** menu.

Day/Date

Enter the day or date you want **EzStart** to run the parameter file. Choose one:

Mon	Sat	
Tue	Sun	
Wed	Weekdays	(Mon through Fri)
Thu	Everyday	(Mon through Sun)
Fri	A valid date	(in the form 01-01-80)

Time

Enter the time you want **EzStart** to run the parameter file. Use a 24 hour clock, like this:

08:00 for 8:00 AM
15:53 for 3:53 PM

Command

Enter the name of a valid parameter file.

6.2 Function Keys in EzStart Set Up

[F1] `Help`: Displays a HELP message. Pressing [F1] a second time displays a more detailed HELP message.

[F2] `ListParFiles`: Displays a list of existing parameter files, along with the date they were created or last modified.

[F3] `Delete Event`: Deletes the current highlighted event.

6.3 Installing EzStart

The easiest way to install **EzStart** is during **EzTape** installation. Simply answer yes to the question

```
Install EzStart into your AUTOEXEC.BAT file?
```

If you do not specify **EzStart** during installation, it is possible to install it later.

If you do not already have an AUTOEXEC.BAT file, you must create one to install **EzStart**. The AUTOEXEC.BAT file resides in the root directory. It is used to specify certain procedures or conditions that you want to occur automatically whenever you start up your system. You can read more about the AUTOEXEC.BAT in your DOS manual.

To run **EzStart**, it should contain these lines:

```
DATE
TIME
C:\EZTAPE\EZSTART
```

If you already have an AUTOEXEC.BAT file, add the lines to it. These commands will:

1. Prompt you to enter the correct date when you start your system up.

2. Prompt you to enter the correct time when you start your system up.

3. Load **EzStart** every time you start the system.

You must enter the correct date and time on startup. **EzTape** uses these parameters to identify files and to know when to execute stored **EzStart** commands.

If your computer has a clock, you may not want to include the DATE and TIME commands.

You can edit the AUTOEXEC.BAT file using the DOS text editor EDLIN, or you can use the DOS COPY CON command.

Chapter 7: Networks

The concepts involved in file selection work just the same on a network. You will see a number of different drives represented in the Source Drives screens. One of the drives will be your local hard disk, probably "C". The other drives may, in actuality, be areas of the network server that you are "mapped" to. For example, **Figure 7–1** shows a Backup Source Drives screen which includes a number of different drive letters. However, notice that several of the letters have the same volume name. The letters represent different logical partitions on the same network drive.

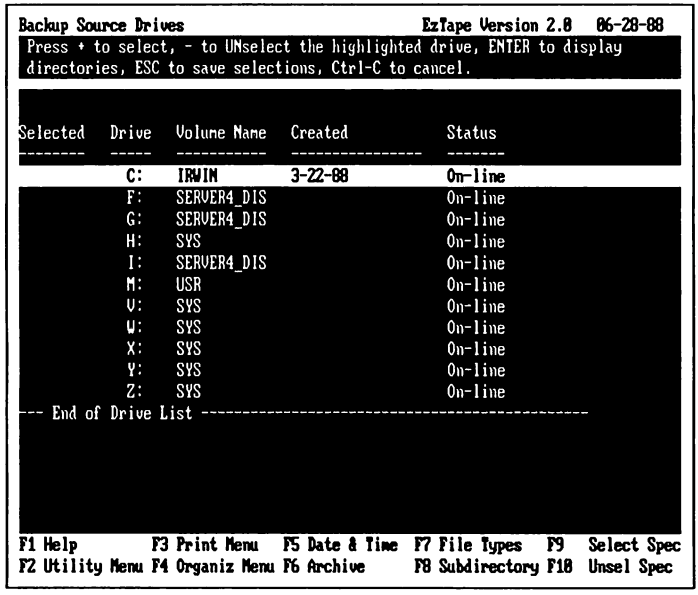


Figure 7–1
Backup Source Drives Screen on a Network

User Files

Backing up network user files is no different than normal file selection and backup. Make selections using the [+] and [-] keys, and the function keys. The user files marked for selection will be backed up, except in two cases:

- The user performing the backup does not have access to the files in the directory as determined by the network rights assigned to it.
- The file is unavailable for backup because it is in use on the network.

In either case, a message will be displayed on the screen, and the backup will continue without operator intervention.

7.1 NETBIOS Compatible Networks

EzTape provides complete support for NETBIOS based network drives. If you run **EzTape** with NETBIOS compatible software, such as the IBM PC Local Area Network Program, you can back up and restore your entire system from a workstation.

To back up your entire NETBIOS compatible system, select a drive for backup using the [+] key in the Backup Source Drives screen. When the backup is complete, select the next drive. Repeat the process for each network drive to be backed up.

You may wish to alter the BACKALL batch file to perform backups of the network drives, as in **Figure 7–2**. You can run this batch file automatically under **EzStart**. The batch file in the example will back up drives C, D, E, and F. It will overwrite existing IMAGE backup sets through extension -3.

```
C:
CD \EZTAPE
EZTAPE BACKUP /t 1: /n IMAGE /x IMAGE /r /q /s C:\*.*
EZTAPE BACKUP /t 1: /n IMAGE /x IMAGE-1 /r /q /s D:\*.*
EZTAPE BACKUP /t 1: /n IMAGE /x IMAGE-2 /r /q /s E:\*.*
EZTAPE BACKUP /t 1: /n IMAGE /x IMAGE-3 /r /q /s F:\*.*
```

Figure 7–2
BACKALL Batch File with Lines Appended for Network Drives

7.2 Novell Networks

EzTape provides complete support for networks running under the Novell Advanced Netware software. In addition to the ability to back up and restore user files on the network, **EzTape** handles the special network system files and security information.

Bindery Files

The Bindery files are special Novell files which contain various user information, such as user names, ID numbers, and passwords. These files are not normally available to users. **EzTape** automatically detects the existence of the Novell network, and checks to see if the user is logged in as the `SUPERVISOR`. If the user is logged in as the `SUPERVISOR`, **EzTape** enables access to the Bindery files. The Bindery information is contained in two files. They are called `NET$BIND.SYS` and `NET$BVAL.SYS`. If either one of these files is selected for backup by the `SUPERVISOR`, both files will be included in the backup. This ensures that the user does not accidentally back up or restore just one of the files and possibly destroy the validity of the Bindery files.

Trustee Rights

Whenever **EzTape** backs up files from a Novell network drive, it also saves the trustee rights. The trustee rights are assigned at the directory level. They specify which users have access to the files.

When you perform a restore in the Novell network environment, you have several options with regard to the trustee rights. You will be prompted to select an option during the restore procedure as part of the restore parameters display (see **Figure 7–3**).

Note: Pay special attention to the target information in the restore parameters window. The default value for the target drive is the currently logged drive.

```
Keep Tree:                          Yes
Target: C:\

Message level:                      1
Older file overwrite level:         1
Network rights restore level:       1
Parameter file name:                EZRESTOR
Day or date to start:               EVERYDAY
Time to start:                      00:00
```

Figure 7–3
Restore Parameters with Network Files

- **Option 0**: Choose option 0 if you do not wish to restore any of the trustee information. If you are restoring files to an existing directory for which the correct trustee rights have already been established, you would choose this option. Similarly, if you are restoring files to a directory for which no trustee rights are desired, you would choose option 0. For example, if you were transferring one of your work files from one Novell network to another Novell network, you might choose option 0 when you performed the restore. The trustee rights already established on each of the networks would remain the same.

- **Option 1**: The default response for the trustee rights is option 1. This specifies that trustee information for the directory containing the files to be restored should also be restored.

- **Option 2**: Option 2 specifies that all available trustee information should be restored. This type of restore includes the trustee rights as in option 1, but it also includes trustee rights associated with directories that are parents to the directory receiving the restored files, up to the root directory. You must have parental rights to the directories being restored in order to perform this type of restore.

Trustee Rights When Restoring to a Different Target

If you are restoring your network files to a different target, you should understand how the trustee rights will be affected. There are two different possible types of restores when you specify a new target, one in which you keep the original tree structure, and one in which you elect to ignore the tree structure.

- **Option 0**: If you select option 0 when restoring to a different target, the trustee rights will be not be affected since you will not be restoring any trustee information.

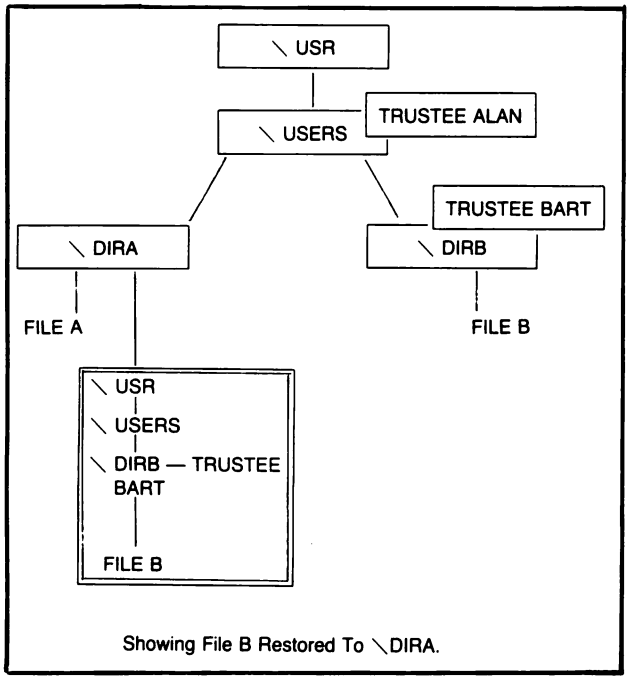


Figure 7–4
Trustee Rights - Option 1, New Target, Keeping Tree Structure

- **Option 1**: If you select option 1 when restoring to a different target, and you elect to keep the tree structure, the tree will be recreated under the target directory and the trustee rights for the directory containing the files being restored will be restored. Thus, in the example shown below, when **FILEB** is restored to the new target directory **DIRA**, the tree structure for **FILEB** is recreated under **DIRA** and the trustee rights for **DIRB** are assigned within that structure. See **Figure 7–4.**

If you select the same option (1) when restoring to a different target, and you elect not to keep the tree structure, the trustee rights for the directory containing the files being restored will be restored to the new target directory. Notice how this type of restore, as shown in **Figure 7–5**, differs from the previous one.

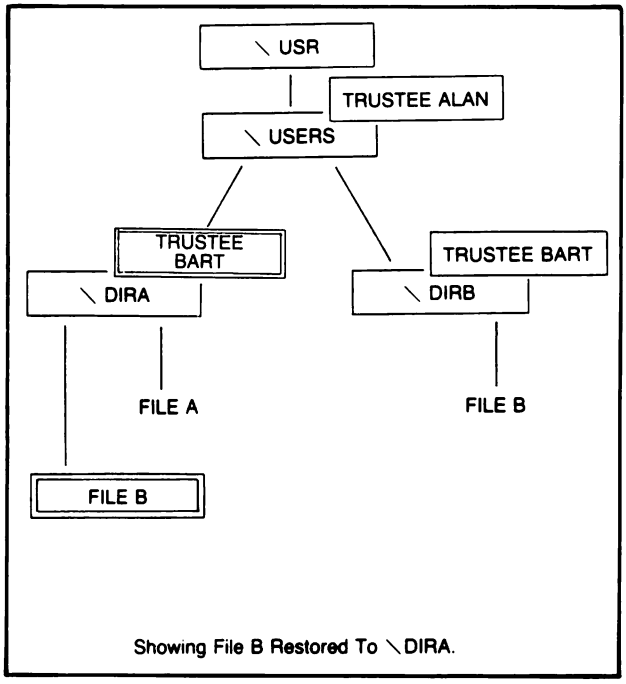


Figure 7–5
Trustee Rights - Option 1, New Target, Without Tree

- **Option 2**: Similarly, if you select option 2 when restoring to a different target, and elect to keep the tree structure, the tree will be recreated under the new target directory, and at each level on the tree, the trustee rights will be restored. See **Figure 7–6.**

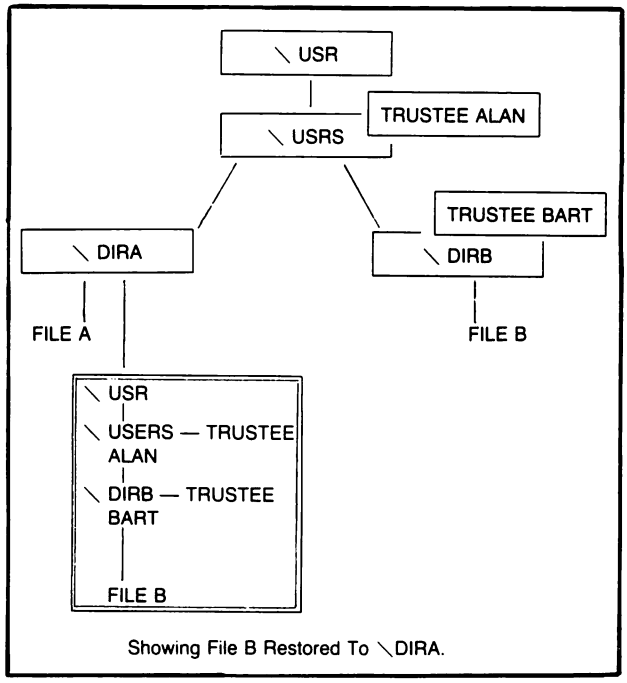


Figure 7–6
Trustee Rights - Option 2, New Target, Keeping the Tree

If you select option 2 when restoring to a different target, and elect not to keep the tree structure, the trustee rights for the files being restored will be assigned to the target directory. All of the rights up the original path will be assigned to the target directory. See **Figure 7–7**.

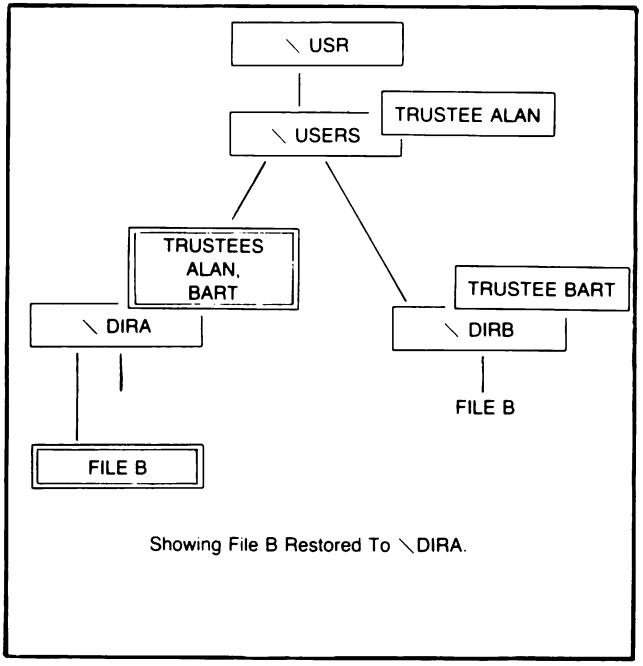


Figure 7–7
Trustee Rights - Option 2, New Target, Without Tree

Maximum Rights

Another feature of the Novell network is maximum rights. Maximum rights allow an owner of a directory to set the maximum rights anyone on the network can have to a particular directory. **EzTape** will save the maximum rights value for a directory when it is backed up. This value will be restored when trustee rights are included in the restore, and they follow the same rules under the options for trustee rights.

Chapter 8: Tape Initialization

8.1 AccuTrak Tapes

Like new diskettes for your computer, new or bulk-erased tapes must be prepared for use in the tape system by recording special codes and signals on them. The process of preparing the tape in this way is called "initialization."

The AccuTrak tape supplied with your Irwin **BACKUP** system already has these codes and signals recorded on it, so it is ready to use. AccuTrak precision formatted tapes provide convenience and flexibility. They're available from your Irwin dealer.

If you will be using AccuTrak tapes, you will never need to initialize a tape.

8.2 Using the Tape Initialization Menu

If you elect to purchase unformatted tapes, you will need to initialize the tapes yourself. There are two steps in the tape initialization process.

1. **SERVO-WRITE**: Servo-writing records a pattern of signals on the tape to guide the read-write head precisely along the data tracks.

2. **FORMAT**: After a tape has been servo-written, it must be formatted. Formatting maps the entire tape for read and write operations, identifying "blocks" of data. This includes a check to identify and catalog defective blocks so they will not be used for storing data.

ERASE: Once a tape has been initialized, it should never be necessary to initialize that tape again. However, if a previously

used tape will be initialized again, it must be erased before servo-writing to prevent possible conflict of servo signals.

Erasing is different than setting the tape to an unused status, in which the tape remains servo-written and formatted (see page 4–3).

Your tape cartridge can be erased using the **EzTape** option or a bulk eraser. A bulk eraser generates a strong magnetic field that erases all data and other signals from a tape or disk. You can purchase a bulk eraser from your Irwin dealer. To erase a tape with a bulk eraser, follow the directions that come with it. **Improper bulk erasure methods will result in initialization failures.**

To use the Tape Initialization menu:

1. Insert a new or bulk-erased tape into your Irwin drive, or a tape to be erased.

2. At the DOS prompt, enter:

   EZTAPE, and press [↵].

3. Press [I] to display the Tape Initialization Menu. See Figure 8–1.

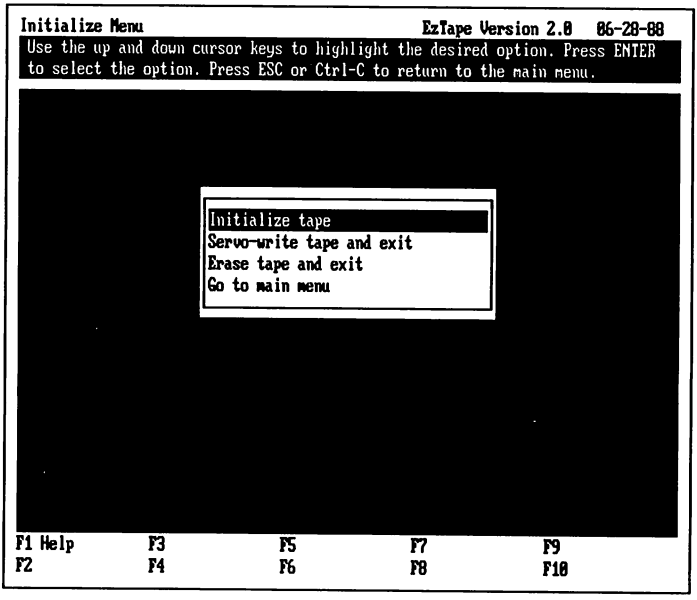


Figure 8–1
Tape Initialization Menu

There are three options in the Initialize Menu.

Initialize Tape

`Initialize Tape` involves both servo-writing and formatting.

1. Press [I] to select the `Initialize Tape` option. **EzTape** will check the tape status. If the tape has already been initialized, a message is displayed (see **Figure 8–2**).

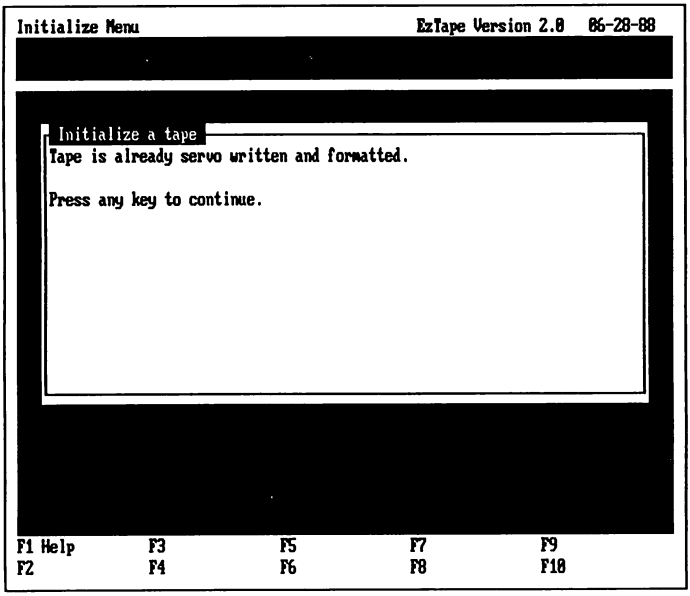


Figure 8–2
A tape containing data

2. If the tape is new or bulk-erased, **EzTape** will tell you how long the initialization is going to take and confirm the operation. If you respond no, the Initialize Menu will be displayed. If you respond yes, the entire operation of servo and format will proceed. You will not be able to use your computer for other things during this time. When initialization is complete, press any key to continue.

3. If the tape has been servo-written using option 2, select the `Initialize Tape` option to complete the formatting phase of the initialization. During this part of the process you will not be able to use your computer for other things.

Servo-Write Tape and Exit

The `Servo-Write Tape` option allows you to perform the servo-writing without your computer's attention. The tape must be erased for this operation to execute.

If the tape has not been properly erased, the servo-write procedure will fail. If that happens, the red light on the drive will blink. You should bulk erase the tape again using the correct procedure before attempting to servo.

1. Within the Initialize Menu, press [S] to select the `Servo-Write and Exit` option.

2. **EzTape** will display a message asking you to confirm the operation. If you answer no, the Initialize Menu will be displayed. If you answer yes, the servo-writing will proceed. Press any key. The Initialize Menu will be displayed. You can leave **EzTape** and do other things with your computer while the tape drive servo-writes. If you exit **EzTape** now, do not re-enter the program until the drive finishes operation and the red light on the drive goes out.

3. If the tape has not been bulk erased, **EzTape** will display a message. Press any key to return to the Initialize Menu.

Erase Tape and Exit

If your drive supports it, the `Erase` option performs a hardware erase. The head acts like a magnet and removes the servo signals on the tape. The erasure can run while you are doing other things with your computer. You should use a bulk eraser if your drive does not support the erase feature.

1. Press [E] to select the `Erase Tape and Exit` option.

2. If your drive supports the erase feature, you will see a message asking you to confirm the operation. If you answer no, the Initialize Menu will be displayed. If you answer yes, the erase will proceed and **YOU WILL LOSE ALL OF THE DATA ON THE TAPE.** Press any key and the Initialize Menu will be displayed. You can leave **EzTape**

and do other things with your computer while the erase operation runs. If you exit **EzTape** now, do not re-enter the program until the drive finishes operation and the red light on the drive goes out.

Chapter 9: The EzTape DOS Command Line

The **EzTape** DOS command line lets the experienced user perform most **EzTape** functions directly from the DOS prompt without going through the **EzTape** menus. If you thoroughly understand the **EzTape** functions, you can use these commands to save time. The commands outlined here are the same as those used in the **EzTape** parameter files.

The basic form of the **EzTape** command is:

EZTAPE [*commandword*] [*optionlist*]

The *commandword* is one of the following:

```
BACKUP
RESTORE
INIT
UTILITY
```

The *optionlist* is a list of options separated by blanks. Each option begins with a slash (/) and a single letter, possibly followed by a blank and an argument string.

For example,

```
EZTAPE UTILITY /r
```

causes **EzTape** to retension the tape. `UTILITY` is the commandword and `/r` is the optionlist.

Another example,

```
EZTAPE UTILITY /n tape1
```

causes **EzTape** to give the tape a volume name ("tape1"). `UTILITY` is the commandword, `/n` is the optionlist, and `tape1` is the argument of the option.

If you look at the BACKALL parameter file, you can see the commands in use.

```
EZTAPE BACKUP /t /n IMAGE /x
IMAGE /r /q /s C:\*.*
```

In the BACKALL parameter file, BACKUP is the commandword, /t, /n, /x, /r, /q, and /s are options. IMAGE is the argument of the /n option; IMAGE is the argument of the /x option, and so

The options available for each command word are described in the following sections.

9.1 Options Common to All EzTape Commands

`/f` [*filename.ext*]
: Specifies a file containing a command string. For example, `EZTAPE BACKUP /f ACCOUNTS.BPF` executes a parameter file called `ACCOUNTS`.

`/g`
: Enhances the screen display for systems using monochrome monitors with color display adapters.

`/l` [*device—filename.ext*]
: Logs program messages to the specified device. For example, `/l report.log` causes the messages to be written to a file called `REPORT.LOG` on the default drive. If invoked more than once, the disk file is overwritten - it does not append. `/l prn` directs the messages to the printer.

/m *messagelevel*
: Sets the message level as follows:

  0 - no messages
  1 - normal messages (default)
  2 - normal and extra informative messages.

`/w`
: Waits for user to press a key after various requests for confirmation during execution. This is especially useful in conjunction with commands that display information, in order to retain them on the screen.

`/yes` Suppresses requests for user confirmation. Assumes "Yes."

9.2 Backup

You can use the following command line options with the `EZTAPE BACKUP` command:

`/a` Selects files with the archive bit ON.

The `/a` option must be followed by the `/s` option.

`/b [r] [h] [s]`
Selects files with attributes as follows:
`r` - includes files with the read-only bit ON.
`h` - includes files with the hidden bit ON.
`s` - includes files with the system bit ON.
If `/b` is specified with no argument, all three file types are excluded. The default for backup is to include all three file types.

The `/b` option must be followed by the `/s` option.

The following example shows how to back up just read only files.

```
EZTAPE BACKUP /b /b r
```

The first `/b` excludes all three file types, the second `/b` with its argument, `r`, turns on just the read-only bit. Since there is no `/s` in the command line, **EzTape** assumes the /s default values.

`/d` [*relation*] [*mm-dd-yy*] [*hh:mm*]
Selects files according to their date and time stamp as follows:

relation is `gt` for **greater than** (after),
`lt` for **less than** (before),
`eq` or = for **equals**, or
`ne` or <> for **not equals**.

mm-dd-yy is the date; the default is 1-01-80.
hh:mm is the time; the default is 00:00.

The /d option must be followed by the /s option.

/n [*setname*]
Specifies the name of backup set. The name can be up to 31 characters long. If **EzTape** encounters a backup set with the same name, it will add a 3-digit extension to the name. If the name is a full 31 characters long, it will truncate the name to add the unique extension.

/q Includes all subdirectories at the directory or file level. If this option is not invoked, subdirectories at those levels will not be included. At the drive level, subdirectories are included regardless of this switch.

/r Resets archive bit.

/s [-] [*drive:*] [[\]*path*\] [*filename.ext*]
Specifies files for inclusion or exclusion.
The current disk drive is the default drive.
The current directory is the default directory.
. is the default file specification.
'-' before the specification designates an unselect, or negative specification.

/v Verifies the tape after backup. A byte-for-byte comparison is performed to verify that the backup is correct.

/x [*setname.ext*]
Overwrites the backup set; does not append. If this option is not invoked, the backup set will append.

Here is an example of the BACKUP command. If executed, it would back up all .EXE files in the BIN directory of the C: hard disk which have been modified since June 1, 1988.

```
EZTAPE BACKUP /d gt 6-1-88 /s C:\BIN\*.EXE
```

9.3 Restore

You can use the following command line options with the EZTAPE RESTORE command:

`/a` Selects files with the archive bit ON.

The `/a` option must be followed by the `/s` option.

`/b [r] [h] [s]`
Selects files with attributes as follows:

`r` - includes files with the read-only bit ON.
`h` - includes files with the hidden bit ON.
`s` - includes files with the system bit ON.

If `/b` is specified with no argument, all three file types are excluded. The default for restore is to include read-only files but not hidden or system files.

The `/b` option must be followed by the `/s` option.

For example, if you wish to restore only hidden files, you would execute the following command line:

```
EZTAPE RESTORE /b /b h
```

Since there is no /s option in the command line, **EzTape** assumes the /s default values.

`/d` [*relation*] [*mm-dd-yy*] [*hh:mm*]
Selects files according to their date and time stamp as follows:

relation is `gt` for **greater than** (after),
`lt` for **less than** (before),
`eq` or = for **equals**, or
`ne` or <> for **not equals**.
mm-dd-yy is the date; the default is `1-01-80`.
hh:mm is the time; the default is `00:00`.

The `/d` option must be followed by the `/s` option.

/k Keeps the original tree structure of the source files. Creates any necessary directories on the target drive.

/o [*x*] Specifies the overwrite action as follows:

0 - restore older files without asking
1 - ask if older files should be restored (default)
2 - don't restore older files.

/q Includes all subdirectories at the directory or file level. If this option is not invoked, subdirectories at those levels will not be included. At the drive or backup set level, subdirectories are included regardless of this switch.

/s [-] [[\]*backup.set**path*] [*filename.ext*]
Specifies files for inclusion or exclusion.
The tape drive, current backup set, and current directory are the defaults.
. is the default filespec.
'-' before the specification designates an UNselect or negative specification. If the command includes the /t option, the /s option must appear after the /t in the command.

/t [*drive:* [*path*]]
Specifies the target disk drive and directory for a restore. The currently logged drive and current directory are the defaults. If the command includes the /s option, the /t option must appear before the /s in the command.

Thus,

```
EZTAPE RESTORE /t \xyz /s
\BACKUP\DOS\ANSI.SYS
```

restores the ANSI.SYS file (from the backup set named BACKUP and directory named DOS) to the \XYZ directory on the default hard disk.

An example of the RESTORE command line follows:

```
EZTAPE RESTORE /s \FRIDAY-3\RALPH\*.MMO
```

This command line restores all the files with an .MMO extension to a directory RALPH from a tape backup set named FRIDAY-3.

9.4 Initialization

You can use the following command line options with the EZTAPE INIT command:

/i Initializes the tape.

/s Servo-writes the tape in the background.

/e Erases the tape in the background.

For example, the command

```
EZTAPE INIT /i
```

initializes the tape.

9.5 Utility

You can use the following command line options with the EZTAPE UTILITY command:

/i Displays information about the tape. Use the /w option with this in order to hold the display on the screen.

/n [*volname*]
Names the tape.

/r Retensions the tape.

/u Sets the tape to unused.

For example, the command

```
EZTAPE UTILITY /i /w
```

displays information about the current tape in the tape drive; waits for you to press a key when you're done reading; then returns to the DOS prompt.

Chapter 10: Troubleshooting

10.1 Tape Initialization

If you are using AccuTrak tapes, there is no need to perform initialization on the tape at any time during its life.

If you are not using AccuTrak tapes, you should know that initialization failures are commonly due to improper bulk erasure procedures. Check with your dealer to make sure that you are using an effective erasure method. If so, check the following:

1. If you have an external tape drive, make sure that you have correctly positioned the unit at least 12 inches away from the monitor or other high frequency noise generating sources.

2. Remove the cartridge, reinsert it, and try again. If you are in the process of servo-writing, the cartridge has to be bulk-erased before retrying the operation. If this doesn't work, see step 3.

3. Use a different cartridge. If the operation now works, the initial cartridge is defective. If this doesn't work, see step 4.

4. Your tape system is probably defective. Return it to your dealer for repair.

10.2 Reading or Writing a Tape File

Things to try:

1. Try the restore again. The problem may be temporary. A speck of dust or other contaminant may have interfered with reading the tape and another attempt might prove successful, even though built-in routines make the system try several times after an unsuccessful read.

2. Clean the tape drive's read/write head, then try the restore again. For cleaning instructions, refer to your installation manual.

10.3 Reading or Writing a Disk File

There are other error messages that arise from a failed attempt by **EzTape** to read or write a file on your hard disk.

If **EzTape** was unable to read or write a disk file, check the following:

1. Does the file name, as you typed it, exist in the current (or specified) directory, on the current (or specified) disk drive?

In addition, if **EzTape** was unable to write a disk file, check the following:

1. Is the disk full? If so, remove or delete some files and try again.

2. Are you using the root directory? It may be full. The number of files in the root directory is limited. (Refer to your DOS manual for more information on this limitation.) Remove a few files from the root directory and try again.

3. Were you trying to write to an existing file that is flagged read-only?

10.4 Memory

A number of error messages arise from a common cause: **EzTape** has run out of memory and cannot complete its current operation. **EzTape** performance is optimized on a computer with 640K bytes of memory, and requires at least 512K bytes to execute. Here are some things to check:

1. Find out how much memory is really available by running `CHKDSK`. (See your DOS manual for information on the `CHKDSK` command.)

2. Is all the memory in your computer system functioning correctly? If you're not sure, re-boot your system or run its diagnostic programs. Refer to the manuals that came with your system for information on testing the memory.

3. Do you have any memory-resident application programs running in your computer at this time? (Check your `CONFIG.SYS` and `AUTOEXEC.BAT` files.) If so, try re-booting your system without installing these other programs. This may free up enough memory to run the **EzTape** operation.

4. Add more memory to your system.

5. Review your **EzTape** file selections. It requires less memory to select groups of files using wildcard characters ("*" and "?") than it does to select each file individually using the "+" selector. Similarly, it takes less memory to specify all files in a given directory, than it does to specify each of the files in that directory individually. Streamline your file specifications and try again.

6. Try dividing your job into smaller pieces. For example, if you are specifying a large and complex backup operation, and it won't run in the available memory, divide it into 2 or 3 less complex operations and try again.

7. Try reorganizing your tree structure. It takes significantly more memory to back up a directory several levels away from the root directory, than it does to back up a directory that is contained in the root directory.

10.5 Power Failure

If electrical power is interrupted during a backup or restore operation, simply start over when the power returns. The incomplete files will be replaced by the new copy. (If you do have a power failure, you'll really appreciate knowing that your data has been safely backed up by your Irwin tape drive.)

10.6 Drive Failure

If the tape drive itself fails during a backup or restore operation, or if you get an unexpected increase in restore failures, try the following steps before you return it to your dealer.

1. Clean the read/write head, then try the operation again. To clean the read/write head, dampen a clean, **non-linting** swab with 90% isopropyl alcohol. (**Do NOT use a cosmetic swab.**) Gently rub the dampened swab up and down the raised surface of the head. The head is the gold-colored metal part inside and toward the back of the cartridge opening.

2. Try a different tape – preferably an AccuTrak tape. You can also use a tape that you have initialized or one that has been properly erased. If you use an erased tape, servo-write and format the tape. Try both backup and restore operations. If the drive operates normally with a different tape, then the problem is likely to be with the tape you were using.

3. If the drive runs but does not transfer data, the cable connection to the computer may be at fault. Sometimes a very small amount of corrosion forms on electrical contacts, interfering with the passage of the data signals. Disconnect the cable and work the plug in and out several times. Secure the connector and try the operation again.

4. If the tape drive itself has ever been opened, the cable connection inside the drive may be loose, or making incomplete contact. Open the drive (see instructions in

your installation manual) and work the cable connection in and out several times. Reassemble the drive and try the operation again.

5. If the drive won't run and its red light doesn't come on, even when the tape is removed and replaced, try the following:

   - Turn off all power to the computer and the drive for 5 seconds, then start over.
   - Check all power connections.
   - If you're using an interface board, check its fuses.
   - If problems persist, contact your dealer.

Chapter 11: Error Messages

In the course of using **EzTape**, you will see a number of messages displayed. Most of these simply tell you what the system is doing, ask questions for you to answer at the keyboard, or give instructions for you to follow. However, if **EzTape** has trouble executing an operation, it may display one or more messages that tell you about the problem. If you cannot correct the problem, make a note of the messages so that you can discuss the problem with your dealer.

The rest of this chapter lists error messages in alphabetical order.

Access denied:

This message is seen on a multi-user system whenever an attempt is made to back up a file to which the user has no rights.

Backup aborted:

A serious tape error has occurred. This may be due to pulling the tape out during the backup or a tape write failure.

Backup set does not exist on this tape:

You have specified a backup set name which is not on this tape volume. View the contents of the volume using restore selection.

Backup set will be called *backupsetname*:

This message is seen when the user has specified a backup set name which already exists on the tape. In order to make the name for the new backup set unique, **EzTape** adds a dash and a sequential number to the name.

Bindery files may be restored only to Novell drives; the bindery files will not be restored:

This message is seen when attempting to restore Novell Bindery files to a drive that is not a Novell network drive. The Bindery files are skipped, but the restore operation will continue.

Controller failure:

There is a system hardware problem. You should run your computer system's diagnostics.

Could not close Novell bindery:

This message is seen when there is an error in the Novell function call to close the Bindery files. The files must be closed before they can be opened and read for backup. There is a problem with the network. **EzTape** will skip the Bindery files and continue with the backup.

Could not create directory *directoryname.* **No files in it will be restored:**

This message is seen when there is an error creating a directory on the hard disk during a restore operation. There may be an existing file with the same name, or the hard disk might be full. All of the files in the directory will be skipped, but the restore will continue.

Could not create target path:

This message is seen when there is an error creating the specified path. The disk may be full, or there may be an existing file with the same name as the target directory. The restore operation will be aborted.

Could not find *filename:*

This message is seen when **EzTape** cannot locate one of the Novell Bindery files in the \SYSTEM directory. There is a problem with the network. **EzTape** will skip the Bindery files and continue with the backup.

Could not find owner for directory:

This message is seen when when **EzTape** receives an error when asking the Novell network shell for the owner of a directory. The backup will continue, but no trustee information is recorded for the directory.

Could not get Novell base for drive *driveletter*:

A network error occurred when attempting to restore trustee information for a Novell directory. The trustee information for the directory will not be restored, but the restore operation will continue.

Could not open file *filename* **– file not backed up:**

The user performing the backup does not have access to the files in the directory as determined by the network rights assigned to it. It is also possible that the file is unavailable for backup because it is in use on the network. A rare possibility when neither of these situations apply is a hard failure on the source disk. In all cases, the file is skipped and the backup continues.

Could not set attributes for file *filename*:

This message is seen when there is an error resetting the archive bits at the end of a backup, or setting the file attributes as a file is restored. The specific error and action are reported in the second part of the message.

Couldn't find trustee file:

This message is seen when **EzTape** cannot read the Novell network trustee information from a tape written by earlier versions of **EzTape**. The restore operation will continue, but no trustee information will be restored. Try the operation again. If it fails a second time, attempt the restore using the earlier version.

Ctlr-drive communication failure:

There is a system hardware problem. You should run your computer system's diagnostics.

Data was read, using ECC:

The tape media in the cartridge is degrading. You should replace it.

Data was read, using retries:

The tape media in the cartridge is degrading. You should replace it.

Defect spares are all used:

The tape media in the cartridge is degrading. You should replace it.

Disk is full:

There is no more available space on the hard disk.

Disk mount error:

The specific error causing this message is reported in the second part of the message. The likeliest problem is that there is not enough memory to perform the operation. The attempted procedure is aborted.

Disk read failure for file *filename* – file not backed up:

An error has occurred while reading from the hard disk. The file is skipped and the backup continues.

Dismount error:

The specific error causing this message is reported in the second part of the message. The result of this type of error is that the backup is aborted.

DMA overrun:

The computer system cannot accommodate the operation at this time. Try the operation again later.

DMA underrun:

The computer system cannot accommodate the operation at this time. Try the operation again later.

Do you want to set the tape to unused? This message is seen when the tape has been used by software other than **EzTape** ver. 2.0. You can use the tape with **EzTape** 2.0 if you first set it to unused through the Utilities menu.

Drive failure:

There is a system hardware problem. You should run your computer system's diagnostics.

Drive not ready:

This message appears any time a tape is removed from the drive while tape operations are in progress.

Drive select failure:

There is a system hardware problem. You should run your computer system's diagnostics.

Error adding trustee *trusteename*:

A network error occurred attempting to add a trustee for a directory which is being restored. **EzTape** will attempt to restore the other trustees for the directory, and the restore operation will continue.

Error closing backup set:

The specific error causing this message is reported in the second part of the message. The result of this type of error is that the backup is aborted.

Error closing file system:

The specific error causing this message is reported in the second part of the message. The result of this type of error is that the backup is aborted.

Error creating backup set:

The specific error causing this message is reported in the second part of the message. The result of this type of error is that the backup is aborted.

Error creating file system:

The specific error causing this message is reported in the second part of the message. The result of this type of error is that the backup is aborted.

Error deleting backup set:

This message is seen when there have been verify errors which were not corrected by performing the backup a second time. **EzTape**

attempted unsuccessfully to delete the backup set to avoid the possibility of restoring bad data. You should replace the tape.

Error initializing tfind:

The specific error causing this message is reported in the second part of the message. The result of this type of error is that the backup is aborted.

Error opening backup set:

This message could be seen at the beginning of either a restore or verify operation. The specific error is reported in the second part of the message. The restore operation will be aborted.

Error opening file system:

The specific error causing this message is reported in the second part of the message. The result of this type of error is that the backup is aborted.

Error opening file *filename*:

An error occurred when opening a file on the hard disk during a restore procedure. The file will be skipped, but the restore continues. Try the operation again.

Error writing directories:

This message is seen when a tape write error occurs on the directory area of a backup set. The specific error is reported in the second part of the message. The backup will be aborted.

Error writing tape header:

This message is seen when the process of setting the tape to unused status fails. The most likely cause is that the tape is write protected. Move the write protect switch on the tape cartridge in the direction of the arrow, then try the process again.

Error writing trustee file:

This message is seen when there is a tape error during the backup of trustee information for a directory on a Novell network drive. The specific error is reported in the second part of the message. The backup will be aborted.

Fatal error in defect list:

An error occurred which makes it impossible to retrieve the data from the tape. The tape has been damaged.

File contents compare error:

When performing an optional verify pass, there is a comparison error between the contents of the tape and the hard disk files. **EzTape** will automatically perform the backup again.

File *filename* already exists with a date of: *date*. Overwrite it with a version dated *date*?

When overwrite level is set to 1, **EzTape** prompts with this message whenever a file on the tape will be restored over a newer version of the file on the hard disk.

File *filename* has changed – file not verified:

On a multi-user system, it is possible for a file to change between the time it is backed up and the time it is verified. If the time, date, or size of the tape and hard disk versions of a file do not match, **EzTape** will not attempt to verify the file.

File *filename* is in use and will not be restored:

This message is seen whenever **EzTape** attempts to restore a file which is currently being used. For example, this message will be displayed if you attempt to restore the **EzTape** program file.

File *filename* will be re-copied:

An error has occurred during the (optional) verification process. There may be an error reading from the tape or there may be an error in the file comparison. **EzTape** will back up the file again in an attempt to fix the problem.

File *filename* will not be backed up:

An error has occurred while reading from the hard disk. The file is skipped and the backup continues.

File *filename* will NOT be re-copied:

An error has occurred while reading from the hard disk during the (optional) verification process. **EzTape** will not back up the file again, nor will it write over the existing backup set since this may be the only data available.

Format failure:

Initialization has failed. Bulk erase the tape and try the procedure again. It is very important to properly bulk erase the tape before initializing to ensure that no signals are left on the tape.

Hidden/system file *filename* will not be copied to its original location:

This message is seen when restoring a file marked hidden and system to a different disk whose cluster size or number of clusters is different. The file will be restored to whatever clusters are available instead of the specific clusters it occupied at the time it was backed up.

H/S init failure:

This message is seen when **EzTape** cannot read hidden-system or split file information from a tape written by earlier versions of **EzTape**. The restore operation will be aborted. Try the operation again. If it fails a second time, attempt the operation again using the earlier version.

ID CRC or ECC error:

The tape media in the cartridge is degrading. You should replace it.

ID was read, using ECC:

The tape media in the cartridge is degrading. You should replace it.

Incompatible cartridge/medium:

The tape drive does not support the type of tape cartridge inserted.

Media format corrupted:

An error occurred which makes it impossible to retrieve the data from the tape. The tape has been damaged.

Media is write protected:

Locate the tab on the tape cartridge marked "RECORD". This is the write protect switch. To write on this tape, move the tab marked "RECORD" in the direction of the arrow.

Medium positioning error:

The tape media in the cartridge is degrading. You should replace it.

Medium was changed:

The tape was changed during an operation. Replace the original tape.

Missing data or data addr mark:

The tape media in the cartridge is degrading. You should replace it.

Missing ID or ID address mark:

The tape media in the cartridge is degrading. You should replace it.

Mount failure:

This message could be seen at the beginning of either a restore or verify operation. The specific error is reported in the second part of the message. The restore operation will be aborted.

No index pulses (NOT SERVOED):

The tape has not been initialized. Initialize the tape using the Initialize menu. It is very important that the tape is properly bulk erased before initializing to ensure that no signals are left on the tape.

No media in drive:

The tape cartridge is not inserted in the drive. Insert the tape cartridge and try again.

No track 0 found (NOT FORMATTED):

The tape is not formatted. Use the Initialize menu to format the tape.

Not enough memory:

There is not enough memory available to perform the specified operation. Some operations require less memory. You may be able to re-organize the operation. Refer to page 10-3. Otherwise, the amount of free memory must be increased.

Please insert another tape:

This message is seen when attempting to back up to a tape that is already full (or one that is nearly full). Use a different tape, delete backup sets from the tape, or set the tape to unused through the Utilities menu.

Please insert another tape or press ESC to cancel:

This message is seen when there has been an error mounting the tape for backup. The tape may not be initialized or it may be defective. Insert a new tape, or bulk erase the tape and initialize it before attempting the backup.

Primary defect list not found:

An error occurred which makes it impossible to retrieve the data from the tape. The tape has been damaged.

Record not found:

The tape media in the cartridge is degrading. You should replace it.

Seek failure for file *filename* – file not backed up:

An error has occurred while reading from the hard disk. The file is skipped and the backup continues.

Sharing violation:

EzTape is attempting to back up a file which is in use by someone else on a multi-user system. The file will be skipped.

Software is corrupted:

Re-install the **EzTape** software and try again.

Source and target disk parameters do not match:

This message is seen when restoring a file marked hidden and system to a different disk whose cluster size or number of clusters is different. The file will be restored to whatever clusters are available instead of the specific clusters it occupied at the time it was backed up.

Tape is not formatted:

Format the tape using the Initialize menu.

Tape is not servoed:

Initialize the tape using the Initialize menu. Make sure that the tape has been properly bulk erased before starting the procedure.

Tape is write protected:

Locate the tab on the tape cartridge marked "RECORD". This is the write protect switch. To write on this tape, move the tab marked "RECORD" in the direction of the arrow.

Tape operations are restricted because there is no tape drive present:

Check the installation of your tape drive. Refer to the installation manual that came with it.

Tape read error for file *filename*:

This message is seen when there is a tape error during restore. The specific error is reported in the second part of the message. Depending on the severity of the error, the file may be skipped or the operation may be aborted.

Tape read error for trustee file:

A tape error occurred for the file containing the trustee information for a Novell directory. The restore operation will be aborted. Try retensioning the tape using the Utilities menu, then try the operation again.

Tape seek error for file *filename*:

This message is seen when there is a tape error during restore. The specific error is reported in the second part of the message. Depending on the severity of the error, the file may be skipped or the operation may be aborted.

Tape seek error for trustee file:

A tape error occurred for the file containing the trustee information for a Novell directory. The restore operation will be aborted. Try retensioning the tape using the Utilities menu, then try the operation again.

Tape write failure:

An error has occurred while writing to the tape. The specific nature of the error is reported in the second part of the message. The backup is aborted. Try the backup again. If it fails a second time, you should use a new tape.

Tapes are not being restored in order; split file *filename* will not be restored:

This message is seen whenever tapes from a multi-volume backup are being restored out of order and **EzTape** encounters a file that spans two tapes. All other selected files will be restored. The split file will not be restored.

The bindery files will not be backed up:

This message is seen when **EzTape** cannot locate (or close) the Novell Bindery files in the \SYSTEM directory. There is a problem with the network. **EzTape** will skip the Bindery files and continue with the backup.

The bindery may be restored by the SUPERVISOR only and to the SYSTEM directory only:

This message is seen when attempting to restore the Bindery files to a Novell directory other than the \SYSTEM directory. It also occurs if a user without supervisor rights attempts to restore the Bindery files. The Bindery files will not be restored, but the restore operation will continue.

The disk is full. The restore operation will be aborted:

There is no more space on the hard disk to which files can be restored.

The tape cannot be changed while restoring:

After entering restore selection, the tape cannot be changed. To make selections with a different tape, exit restore selection, change the tape, then re-enter restore selection.

There is no tape drive present:

Check to make sure that your tape drive is properly installed. Refer to the installation manual that came with your tape drive.

This is not the first tape of backup set ***backupsetname.*** **Do you want to restore it anyway?**

This message is seen when a restore operation is started with a tape which is not the first tape in a multi-volume backup set. If the first tape is missing, or if you know that the desired file is not on the first tape, you might want to continue. If the procedure continues, no split files will be restored, but the remaining portion of the backup set will be restored.

This tape has been written by ' ':

This message is seen when the tape has been used by software other than **EzTape** ver. 2.0. You can use the tape with **EzTape** 2.0 if you first set it to unused through the Utilities menu.

This tape is too full to begin a backup set:

This message is seen when attempting to back up to a tape that is already full (or one that is nearly full). Use a different tape, delete

backup sets from the tape, or set the tape to unused through the Utilities menu.

This tape was not written with EzTape:

EzTape can restore tapes written by **EzTape** and Irwin IMAGE only.

Too many trustees in directory:

This message would be seen in the very rare instance that a directory on a Novell drive has more trustee information than a buffer can hold. The backup will continue, but the extra trustee information will not be recorded.

Track following error:

The tape media in the cartridge is degrading. You should replace it.

UIBASE: can't load [*program file name*]:

EzTape is contained in several program files. The specified file could not be loaded for execution, probably because the file is in a different directory than the one that **EzTape** was run from. The files should be contained in the same directory.

Unrecoverable read error:

An error occurred which makes it impossible to retrieve the data from the tape. The tape has been damaged.

Unrecoverable read error, hard error on disk:

An error occurred which makes it impossible to retrieve data from the hard disk. Try to perform the operation again. If it fails again, the hard disk or a portion of it is probably damaged. The file on which this error occurred cannot be backed up.

Unrecoverable write error:

An error occurred which makes it impossible to retrieve the data from the tape. The tape has been damaged.

Unsupported optional command:

Your tape drive does not support the option you are attempting.

Unsupported required command:

Your tape drive does not support the option you are attempting.

User *username* does not exist on this net:

During restore, one of the trustees for a directory on the tape does not exist on the target Novell drive. All other trustees are restored, and the restore operation continues.

Verify failure for file *filename*:

An error has occurred during the (optional) verification process. There may be an error reading from the tape or hard disk, or there may be an error in the file comparison. Unless the error occurred while reading from the hard disk, **EzTape** will back up the file again in an attempt to fix the problem. If the error occurred while reading from the hard disk, **EzTape** will not back up the file again, nor will it write over the existing backup set since this may be the only data available.

Verify has failed. Backup set *backupsetname* will be deleted:

This message is seen when there have been verify errors which were not corrected by performing the backup a second time. The backup set is deleted to avoid the possibility of restoring bad data. You should replace the tape.

Volume not written with EzTape:

This message is seen when attempting to restore a tape which was not written by EzTape 2.0, EzTape 1.x, or Irwin IMAGE. The restore operation will be aborted.

You have inserted tape [*tape number*]. Please insert [*tape number*]:

When restoring files from a backup set that spans more than one tape, **EzTape** will request the tapes in order. This message indicates that the tapes were supplied out of order.

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Customer Support

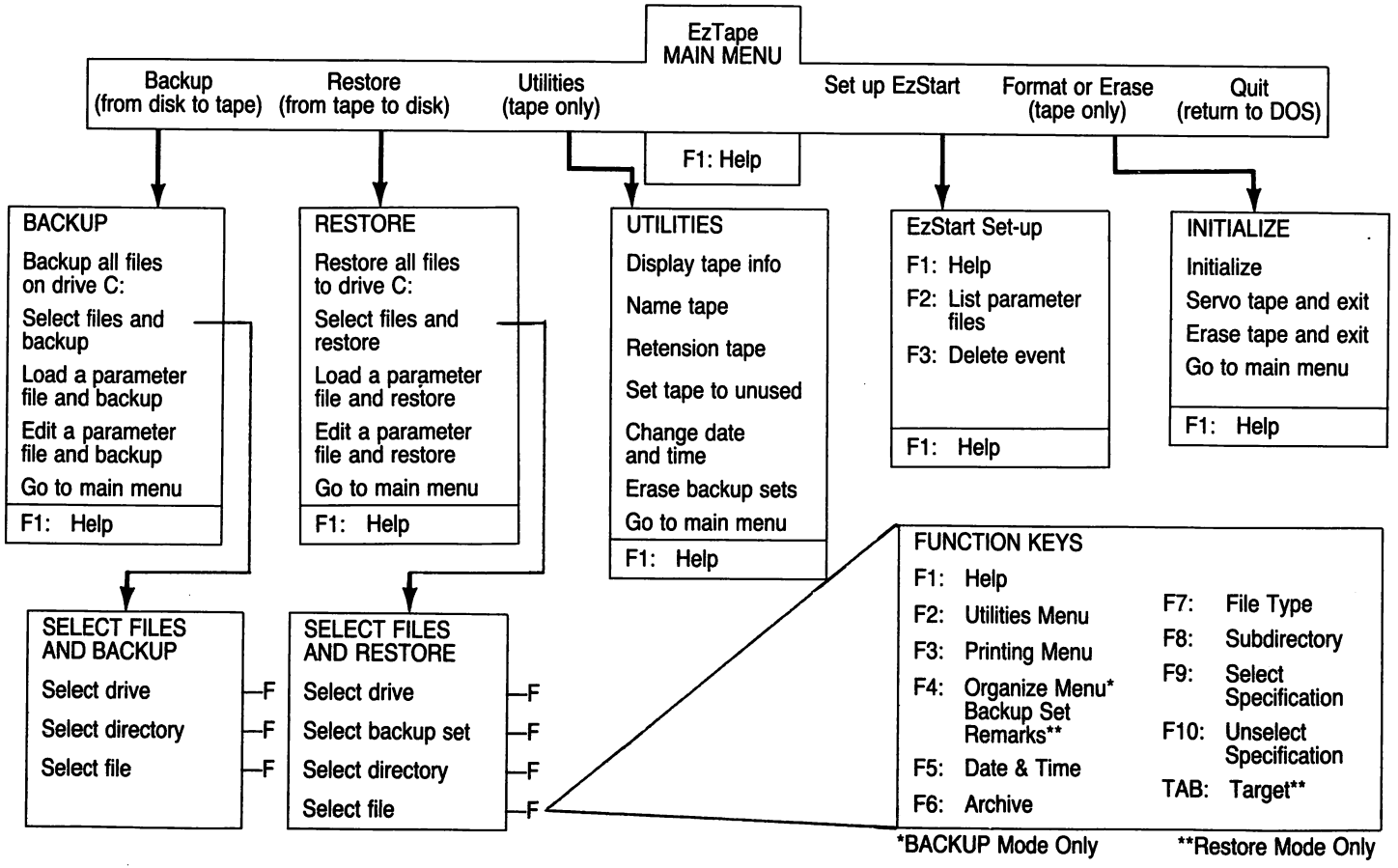
If you have questions about operating the **EzTape** software or about the installation of your Irwin BACKUP system, please contact your Irwin dealer. Jot down the following information first:

1. What type of computer you have
2. What version of DOS you are running under
3. What version of **EzTape** you are using
4. The contents of your `CONFIG.SYS` file
5. The contents of your `AUTOEXEC.BAT` file

Or write to us at the address below:

Irwin Magnetics
Customer Support
2101 Commonwealth Blvd.
Ann Arbor, Michigan 48105
U.S.A.




EzTape
MAIN MENU
Backup
(from disk to tape)
Restore
(from tape to disk)
Utilities
(tape only)
Set up EzStart
Format or Erase
(tape only)
Quit
(return to DOS)
F1: Help
BACKUP
Backup all files on drive C:
Select files and backup
Load a parameter file and backup
Edit a parameter file and backup
Go to main menu
F1: Help
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Select files and restore
Load a parameter file and restore
Edit a parameter file and restore
Go to main menu
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Select file
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FUNCTION KEYS
F1: Help
F2: Utilities Menu
F3: Printing Menu
F4: Organize Menu* Backup Set Remarks**
F5: Date & Time
F6: Archive
F7: File Type
F8: Subdirectory
F9: Select Specification
F10: Unselect Specification
TAB: Target**
*BACKUP Mode Only
**Restore Mode Only

Special Keys

↵	To advance to the next screen.
Esc	To return to the previous screen.
↑	To position your cursor.
↓	To position your.cursor.
PgUp	To scroll directory or file displays.
PgDn	To scroll directory or file displays.
+	Add: Adds the currently highlighted file or directory to the current file selection.
–	Delete: Deletes the currently highlighted file or directory from the current file selection.
CTRL C	Abort: Goes up one level in the menu hierarchy, and aborts any selections made at the current level or below.

Special Keys Used in EzStart

F1	Help: Displays a HELP message. Pressing F1 a second time displays a more detailed HELP message.
F2	ListParFiles: Displays a list of existing parameter files, along with the date they were created or last modified.
F3	Delete Event: Deletes the current highlighted event.

Special Keys Used in File Selection

F1	Help: Displays a HELP message. Pressing F1 a second time displays a more detailed HELP message.
F2	Utilities Menu: Accesses the Utilities menu, from which you can display information about a tape, give it a name, retension it, set it to unused, or erase backup sets. Also lets you change the MS-DOS date and time.
F3	Printing Menu: Lets you print lists of files.
F4	Organizing Menu: Lets you copy, move, and delete disc files and directories during backup file selection. During restore, lets you display backup set remarks.
F5	Date & Time: Lets you restrict subsequent file selection based on date and time.
F6	Archive: Lets you restrict subsequent file selection based on whether a file has been created or changed since its last backup.
F7	File Types: Lets your subsequent file selection include or exclude read-only, hidden, and system files.
F8	Subdirectory: Lets your subsequent file selection include or exclude subdirectories of a selected directory.
F9	Select Spec: Lets you select files using DOS filenames with wildcards and the restrictions and inclusions set by F5 , F6 , F7 , F8 .
F10	Unselect Spec: Lets you UNselect files and directories using DOS filenames with wildcards and the restrictions and inclusions set by F5 , F6 , F7 , F8 .
→	Target: Lets you specify the target disc drive and directory; lets you choose whether to keep original structure of the restored files.

Batch Files

Batch files can be run from the MS-DOS prompt.

Backall — Backup the entire hard disc.

Changed — Backs up new or modified files.

Restall — Restores entire contents of a tape.

EzTape Quick Reference